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Physician Group Practice Demonstration Quality Measurement and Reporting Specifications

Version 2

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PHYSICIAN GROUP PRACTICE DEMONSTRATION
QUALITY MEASUREMENT AND REPORTING SPECIFICATIONS

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*RTI International is a trade name of Research Triangle Institute.

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SECTION 1
INTRODUCTION

The physician group practice (PGP) demonstration is a unique reimbursement mechanism that rewards providers for coordinating and managing the overall health care needs of a non-enrolled, fee-for-service (FFS) Medicare patient population. It offers the Centers for Medicare & Medicaid Services (CMS) an opportunity to test whether a new financial incentive structure can improve service delivery and quality for Medicare patients, and ultimately prove cost-effective.

The PGP demonstration superimposes new incentives on traditional FFS reimbursement that are more in line with capitation incentives. PGPs will have an incentive to reduce utilization for Medicare FFS patients. However, PGPs that do not reduce utilization are not penalized under the demonstration. The PGP demonstration also includes explicit incentives for quality improvement.

This Section provides an overview of the demonstration methodology. The remainder of this report specifies the methods for quality measurement that will be used to calculate quality performance payments under the demonstration. Additional details on other aspects of the demonstration methodology are available in a companion report.[1] The timeline for the demonstration will be:

- Base Year: January 1, 2004 – December 31, 2004
- Performance Year One: April 1, 2005 – March 31, 2006
- Performance Year Two: April 1, 2006 – March 31, 2007
- Performance Year Three: April 1, 2007 – March 31, 2008

In this report the term "year" is defined as a time period consisting of 12 consecutive months. The term "year" applies to both the base year, which is a calendar year, and to the performance years, which are not calendar years.

Figure 1-1 on the following page shows the steps involved in calculating PGP performance payments. The first step involves calculating whether or not a PGP generated annual Medicare cost savings greater than 2% of its target expenditures for its assigned beneficiaries. Assigned beneficiaries are those for whom the PGP has provided more primary care services than any other provider. The 2% threshold is used to account for the possibility of random fluctuations in expenditures.

A PGP's expenditure target is calculated by first identifying a comparison group of Medicare beneficiaries treated in the surrounding community. The rate of growth in per-capita expenditures for those beneficiaries is calculated from a base year to the current performance year. The comparison group growth rate is then applied to the base year per capita expenditures

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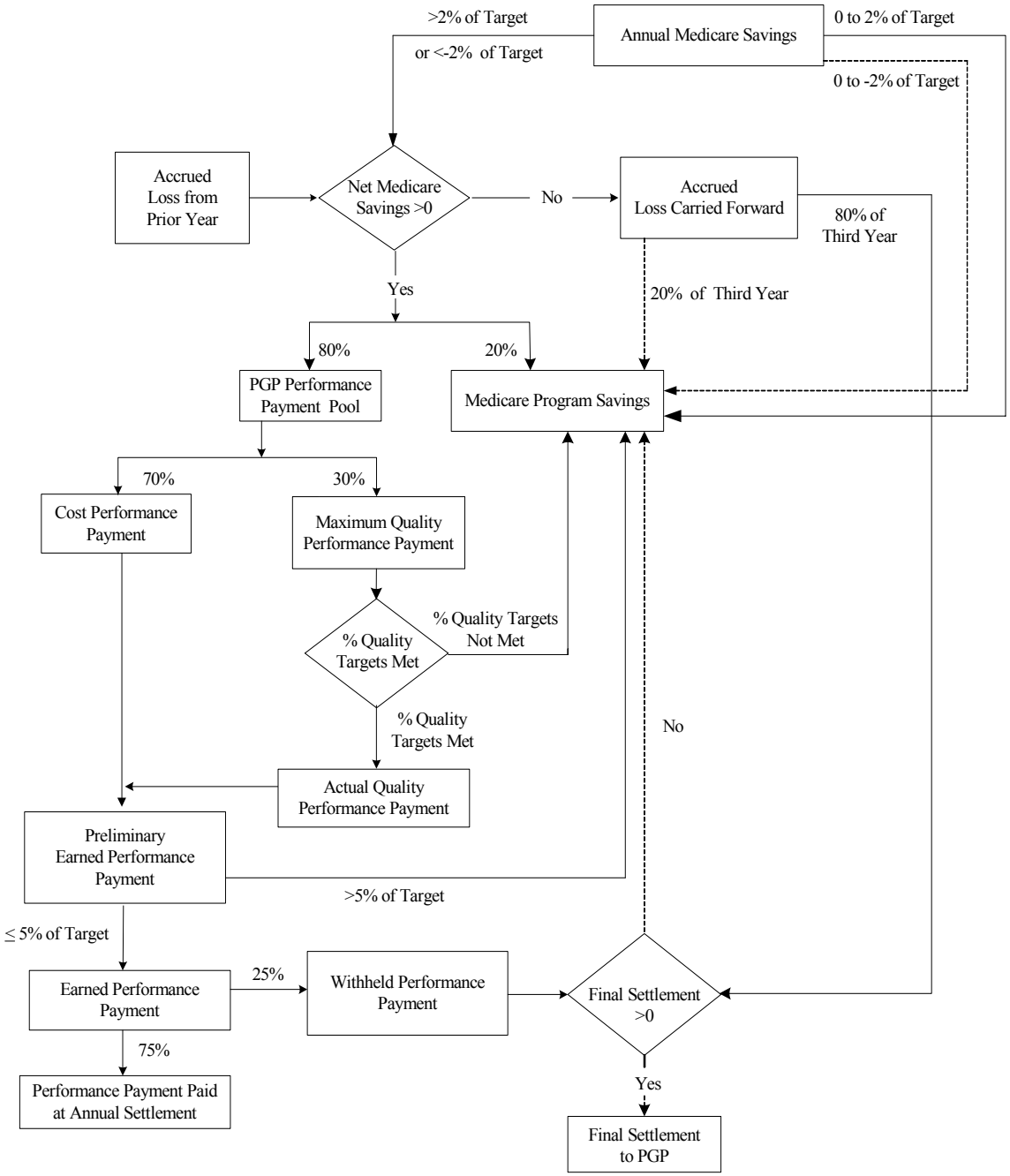
[1] Kautter J, Pope G, Trisolini M, et al. Physician Group Practice Demonstration Bonus Methodology Specifications. CMS Contract No. 500-00-0024, T.O. No. 13, December, 2004.

Figure 1-1
Process for calculating performance payments in the PGP demonstration



NOTE: Dotted lines represent negative contribution to Medicare program savings.

[1] Annual Medicare Savings between -2% and 2% of target expenditures are not included in performance payment computations because they may result from random fluctuations. They are included in Medicare Program Savings.

[2] In Performance Year 1, the cost performance payment and maximum quality performance payment shares of the PGP performance payment pool are 70% and 30%, respectively. In Performance Year 2, the shares are 60% and 40%, respectively, and in Performance Year 3, the shares are 50% and 50%, respectively.

[3] For the calculation of the percentage of quality targets met in a performance year, claims-based quality targets will be weighted four times as much as chart-based and hybrid quality targets.

SOURCE: RTI International

for the PGP's own assigned beneficiaries, to set the PGP's target expenditure level. (Risk adjustments are applied in these calculations to account for casemix changes between years.)

If the PGP holds the expenditures for its assigned beneficiaries more than 2% below that target, it is eligible to earn a performance payment for that performance year (assuming there are no accrued losses from previous years). The Net Medicare Savings are calculated as the amount of Annual Medicare Savings greater than the 2% threshold.

The Net Medicare Savings are next divided, with 80% going to a PGP performance payment pool and 20% retained by Medicare as program savings. The PGP performance payment pool is then itself divided between a cost performance payment and a maximum quality performance payment.

In performance year one of the demonstration the cost performance payment and maximum quality performance payment shares of the PGP performance payment pool are 70% and 30%, respectively. In performance year two the respective shares are 60% and 40%, and in performance year three the shares are 50% and 50%. The actual quality performance payment is then determined, based on the percentage of the demonstration's quality targets the PGP has met in that year. If all of the quality targets are met, then the entire maximum quality performance payment is earned by the PGP. However, if some of the quality targets are not met, then a portion of the maximum quality performance payment is retained by Medicare.

A PGP Demonstration Quality Consensus Agreement was reached at the December, 2004 PGP demonstration implementation meeting. Representatives from CMS and the participating PGPs attended that meeting. The PGP attending included:

- Dartmouth-Hitchcock Clinic
- Deaconess Billings Clinic
- The Everett Clinic
- Geisinger Health System
- Middlesex Health System
- Marshfield Clinic
- Forsyth Medical Group
- Park Nicollet Health Services
- St. John's Health System
- University of Michigan Faculty Group Practice

A copy of the PGP Demonstration Quality Consensus Agreement is included in Appendix 1. It identified the quality measures that will be used to calculate the quality targets,

the methods used to calculate the denominator populations for each measure, the types of targets set for each measure, the breakdown between claims-based measures and medical records-based or hybrid measures, how the measures are weighted to calculate the percentage of targets met, and also addressed related topics.

The following Sections of this report describe the methods for measuring the demonstration quality indicators and calculating the PGP quality performance payments in more detail. The specific quality measures to be used in the demonstration and their measurement processes are described in Section 2. Procedures for claims-based analysis of quality measures are presented in Section 3. Procedures for calculating medical record-based or hybrid measures are included in Section 4. Section 5 describes procedures for warehousing data produced for the demonstration for quality measurement. Finally, Section 6 includes timetables for implementing the quality measurement procedures during each year of the demonstration.

SECTION 2
MEASURING QUALITY FOR THE PGP DEMONSTRATION

2.1 Overview of the Quality Measurement Process

This section summarizes the PGP Demonstration Quality Consensus Agreement reached in December, 2004. The quality measures for the PGP demonstration are a subset of the measures developed for the Doctors Office Quality (DOQ) project, including diabetes (DM), congestive heart failure (CHF), coronary artery disease (CAD), hypertension (HTN) and preventive care (PC) condition modules. In addition, DOQ preventive care vaccine and cancer screening measures will also be used in the PGP demonstration for the diabetes and heart failure patient populations. ***Table 2-1*** lists the 32 specific quality measures included in the PGP demonstration.

The quality measures will be phased in under the following time frame:

Performance Year 1: Diabetes measures, including flu and pneumonia vaccine measures for the diabetic population

Performance Year 2: Year 1 measures plus the CHF and CAD measures, including flu and pneumonia vaccine measures for the CHF population

Performance Year 3: Year 2 measures plus the hypertension measures and colorectal and breast cancer screening measures

Claims based measures will have a weighting of 4, while medical record-based or hybrid measures will have a weighting of 1 in determining the payments for quality. Table 2-1 indicates which measures will have a weight of 4 and which will have a weight of 1. The total annual quality points available are below.

Performance Year 1: 22 points

Performance Year 2: 45 points

Performance Year 3: 53 points

PGPs may earn separate quality performance payments if they meet quality performance targets for each of the quality measures. For each measure, PGPs must achieve at least one of three targets: 1) the higher of 75% compliance or the Medicare HEDIS mean for the measure (for those measures where HEDIS indicators are also available); OR 2) demonstrate a 10% or greater reduction in the gap between the administrative baseline and 100% compliance; OR 3) achieve the 70th percentile Medicare HEDIS level (for those measures where HEDIS indicators are also available).

Denominator populations for the quality measures will be taken from the same assigned beneficiary population used in the PGP demonstration for financial reconciliation, although limited to the assigned beneficiaries with full-year Medicare eligibility and at least two office or other outpatient E&M visits at the PGP. Subsets of each PGP's remaining assigned beneficiaries

then will be used for the denominators for each quality measure, based on disease status and other characteristics. For the two-year quality measures, DM-7 and PC-5, the denominator will include only beneficiaries assigned in both of the relevant years.

Table 2-1
Quality measures, weights and total quality points by module for the PGP demonstration

Diabetes mellitus	Weight	Congestive heart failure	Weight	Coronary artery disease	Weight	Preventive care	Weight
DM-1 HbA1c Management	4	HF-1 Left Ventricular Function Assessment	1	CAD-1 Antiplatelet Therapy	1	HTN-1 Blood Pressure Screening	1
DM-2 HbA1c Control	1	HF-2 Left Ventricular Ejection Fraction Testing	4	CAD-2 Drug Therapy for Lowering LDL Cholesterol	1	HTN-2 Blood Pressure Control	1
DM-3 Blood Pressure Management	1	HF-3 Weight Measurement	1	CAD-3 Beta-Blocker Therapy – Prior MI	1	HTN-3 Plan of Care	1
DM-4 Lipid Measurement	4	HF-4 Blood Pressure Screening	1	CAD-4 Blood Pressure	1	PC-5 Breast Cancer Screening	4
DM-5 LDL Cholesterol Level	1	HF-5 Patient Education	1	CAD-5 Lipid Profile	4	PC-6 Colorectal Cancer Screening	1
DM-6 Urine Protein Testing	4	HF-6 Beta-Blocker Therapy	1	CAD-6 LDL Cholesterol Level	1	[redacted]	[redacted]
DM-7 Eye Exam	4	HF-7 Ace Inhibitor Therapy	1	CAD-7 Ace Inhibitor Therapy	1	[redacted]	[redacted]
DM-8 Foot Exam	1	HF-8 Warfarin Therapy for Patients	1	[redacted]		[redacted]	[redacted]
DM-9 Influenza Vaccination	1	HF-9 Influenza Vaccination	1	[redacted]		[redacted]	[redacted]
DM-10 Pneumonia Vaccination	1	HF-10 Pneumonia Vaccination	1	[redacted]		[redacted]	[redacted]
Total Points	22	[redacted]	13	[redacted]	10	[redacted]	8

Sampling may be used to identify denominators for the medical records-based or hybrid measures. PGPs can also elect to perform hybrid data collection for any of the claims-based measures. The baseline year for the quality measures will be calendar year 2004. The applicable Medicare HEDIS levels will be those reported to CMS in the calendar year immediately prior to the respective PGP performance year.

These quality measurement methods are elaborated in further detail in the following Sections. Implementation procedures are also reviewed.

2.2 Types of Targets for Meeting Quality Improvement Goals

As noted, both threshold and quality improvement targets will be available for PGPs to demonstrate they have met the quality performance goals of the demonstration. Requirements for meeting each of these targets are specified below.

2.2.1 Threshold Targets

Two types of threshold targets are possible for each quality measure where a Medicare HEDIS level is available for comparison purposes. In that situation, a PGP can meet either of the two thresholds to demonstrate quality performance:

1. The **higher** of 75% compliance with the measure **OR** the Medicare HEDIS mean for the measure

2. The 70th percentile Medicare HEDIS level for the measure

Medicare HEDIS data are those from all Medicare Advantage plans required to report HEDIS measures to CMS. As indicated in ***Table 2-2***, those data are available for 12 DOQ measures with denominator and numerator definitions similar to those used by HEDIS. For performance year 1, the HEDIS data used would be those from 2003; for performance year 2, the HEDIS data would be from 2004; and for performance year 3 the HEDIS data would be from 2005. Data for 2003 are included in Table 2-2.

For the other 20 DOQ quality measures used for the PGP demonstration, where Medicare HEDIS data are not available, the threshold target will default to 75% compliance with the measure.

One quality measure, DM-2, HbA1c control, is expressed in a reverse direction, where higher percentages mean worse outcomes (i.e., more diabetics with HbA1c > 9.0%). For this measure an additional step will be taken to compute PGP performance in reverse, so that the threshold will be 75% or more diabetics with HbA1c levels ≤ 9.0%.

2.2.2 Quality Improvement Targets

The quality improvement target will be calculated as a 10% reduction in the gap between the base year level for the measure and 100% compliance with the measure. For example, if a PGP achieves 40% compliance with a quality measure in the base year (2004), then the gap between that level and 100% is 60%. As a result, the PGP must reduce the gap by 10% of 60% or

6 percentage points, so its quality improvement target is 46%. If the PGP achieves 46% compliance with the quality measure in any of the three performance years of the demonstration, then it will be judged as having met the quality improvement target for that measure for that year.

2.3 Quality Measures to be Included in the PGP Demonstration

As noted, the quality measures used in the PGP demonstration are based on a subset of the DOQ quality measure set developed and specified under the direction of CMS. Contributors to the development of the DOQ measure set included the American Medical Association's Physician Consortium for Performance Improvement, the American College of Cardiology, the American Heart Association, the National Diabetes Quality Improvement Alliance, the National Committee for Quality Assurance, and the Veterans Health Administration.

Table 2-2
Crosswalk of DOQ measures to HEDIS measures

		2003 HEDIS Data	
DOQ Measures	**HEDIS Measures**	**Mean**	**70th Percentile**
DM-1 HbA1c Testing	HbA1c Tested	87%	92%
DM-2 HbA1c Level	HbA1c Poorly Controlled (>9.0%)	76*	83*
DM-4 Lipid Measurement	LDL-C Screening Performed	91	95
DM-5 LDL Cholesterol Level	LDL-C Controlled (LDL < 130 mg/dl)	67	73
DM-6 Urine Protein Testing	Kidney Disease (Nephropathy) Monitored	53	58
DM-7 Eye Exam	Retinal Eye Exam Performed	64	72
CAD-3 Beta-Blocker Therapy	Beta Blocker After Heart Attack	92	97
CAD-5 Lipid Profile	Cholesterol Management After Acute Cardiovascular Event – LDL-C Screening Performed	81	85
CAD-6 LDL Cholesterol Level	Cholesterol Management After Acute Cardiovascular Event – LDL-C Controlled (LDL<130mg/dl)	66	74
HTN-2 Blood Pressure Control	Controlling High Blood Pressure	61	66
PC-5 Breast Cancer Screening	Breast Cancer Screening	73	79
PC-6 Colorectal Cancer Screening	Colorectal Cancer Screening	49	56

*Data reversed to show percent not poorly controlled

As noted, the DOQ measures selected for the PGP demonstration address several aspects of care for beneficiaries with diabetes mellitus, heart failure, coronary artery disease, hypertension, and some preventive care services. More detailed descriptions of these measures are as follows:

Diabetes Mellitus (DM) Module

HBA1c Management

DM-1: Percentage of diabetic patients with one or more A1c test(s)

DM-2: Percentage of diabetic patients with most recent A1c level > 9.0% (poor control)

Blood Pressure Management

DM-3: Percentage of diabetic patients with most recent BP < 140/90 mmHg

Lipid Measurement

DM-4: Percentage of diabetic patients with at least one low-density lipoprotein (LDL) cholesterol test

LDL Cholesterol Level

DM-5: Percentage of diabetic patients with most recent LDL cholesterol < 130 mg/dl

Urine Protein Testing

DM-6: Percentage of diabetic patients with at least one test for microalbumin during the measurement year; or who had evidence of medical attention for existing nephropathy (diagnosis of nephropathy or documentation of microalbuminuria or albuminuria)

Eye Exam

DM-7: Percentage of diabetic patients who received a dilated eye exam or evaluation of retinal photographs by an optometrist or ophthalmologist during the measurement year, or during the prior year (this measure is adapted for claims data measurement)

Foot Exam

DM-8: Percentage of eligible diabetic patients receiving at least one complete foot exam (visual inspection, sensory exam with monofilament, and pulse exam)

Influenza Vaccination

DM-9: Percentage of diabetic patients 50 years and older who received an influenza vaccination from September through February of the year prior to the measurement year.

Pneumonia Vaccination

DM-10: Percentage of diabetic patients 65 years and older who ever received a pneumococcal vaccination

Heart Failure (HF) Module

Left Ventricular Function (LVF) Assessment

HF-1: Percentage of HF patients who have quantitative or qualitative results of LVF assessment recorded

Left Ventricular Ejection Fraction Testing

HF-2: Percentage of patients hospitalized with a principal diagnosis of HF during the current year who had left ventricular ejection fraction testing during the current year

Weight Measurement

HF-3: Percentage of HF patient visits with weight measurement recorded

Blood Pressure Screening

HF-4: Percentage of HF patient visits with blood pressure measurement recorded

Patient Education

HF-5: Percentage of HF patients who were provided with patient education on disease management and health behavior changes during one or more visit(s) within a six-month period

Beta-Blocker Therapy

HF-6: Percentage of HF patients who also have LVSD who were prescribed beta-blocker therapy

ACE Inhibitor Therapy

HF-7: Percentage of HF patients who also have LVSD who were prescribed ACE inhibitor therapy

Warfarin Therapy for Patients with Atrial Fibrillation

HF-8: Percentage of HF patients who also have paroxysmal or chronic atrial fibrillation who were prescribed warfarin therapy

Influenza Vaccination

HF-9: Percentage of HF patients 50 years and older who received an influenza vaccination from September through February of the year prior to the measurement year

Pneumonia Vaccination

HF-10: Percentage of HF patients 65 years and older who ever received a pneumococcal vaccination

Coronary Artery Disease (CAD) Module

Antiplatelet Therapy

CAD-1: Percentage of CAD patients who were prescribed antiplatelet therapy

Drug Therapy for Lowering LDL Cholesterol

CAD-2: Percentage of CAD patients who were prescribed a lipid-lowering therapy (based on current ATP III guidelines)

Beta-Blocker Therapy

CAD-3: Percentage of CAD patients with prior MI who were prescribed beta-blocker therapy

Blood Pressure

CAD-4: Percentage of CAD patients who had a blood pressure measurement during the last office visit

Lipid Profile

CAD-5: Percentage of CAD patients receiving at least one lipid profile during the reporting year

LDL Cholesterol Level

CAD-6: Percentage of CAD patients with most recent LDL cholesterol < 130 mg/dl

ACE Inhibitor Therapy

CAD-7: Percentage of CAD patients who also have diabetes and/or LVSD who were prescribed ACE inhibitor therapy

Hypertension (HTN) Module

Blood Pressure Screening

HTN-1: Percentage of hyptertensive patients' visits with blood pressure measurement recorded

Blood Pressure Control

HTN-2: Percentage of hyptertensive patients with last blood pressure < 140/90 mmHg

Plan of Care

HTN-3: Percentage of hypertensive patients' visits with either systolic blood pressure > 140 mmHg or diastolic blood pressure > 90 mmHg with a documented plan of care for hypertension

Preventive Care (PC) Module

Breast Cancer Screening

PC-5: Percentage of female beneficiaries aged 50-69 years who had a mammogram during the measurement year or the year prior to the measurement year

Colorectal Cancer Screening

PC-6: Percentage of beneficiaries aged 50 years or more who were screened for colorectal cancer during the one-year measurement period

2.4 Types of Measurement Processes Used for Quality Measures

Two types of measurement processes will be used to calculate quality performance in the PGP demonstration: 1) claims data analysis (7 quality measures); and 2) medical records or hybrid data analysis (25 quality measures). The procedures to be used for each process are reviewed below.

2.4.1 Claims Data Analysis Procedures

The overall group of beneficiaries eligible for claims data analysis for quality measurement will be limited to full-year assigned beneficiaries for each PGP. In this way, Medicare claims data on the health services received by beneficiaries will be available for the entire period represented by the base year and individual performance years of the demonstration. Without complete, full-year data, a beneficiary might be classified as not receiving a treatment or test required for a quality indicator when in fact the service had been received, but not recorded in Medicare claims data if it was provided outside the time period covered by Medicare eligibility.

As a result, beneficiaries assigned to a PGP who became Medicare eligible after January 1st of the base year or after April 1st of a performance year will not be included in that year's quality measurement calculations. Similarly, beneficiaries who died in the middle of the base year or performance year will not be included in the quality performance calculations. In sum, the PGPs' assigned beneficiaries included in the quality performance payment analysis will be a subset of those included in the financial performance payment calculations, since the latter will include all assigned beneficiaries (both full-year and part-year).

Denominators for each claims-based measure will include 100% of the full-year assigned beneficiaries who meet the criteria for that quality measure. Detailed specifications for the denominator calculations for the claims-based quality measures are included in Section 3 below.

Numerators for each claims-based quality measure will include all beneficiaries in the denominator population who also satisfy the quality performance criteria for that measure. Detailed specifications for the numerator calculations for the claims-based quality measures are also included in Section 3.

Topping Up. PGPs will have the option of "topping up" the numerators for claims-based measures. This will involve accessing additional data on the denominator beneficiaries for these measures from the PGPs' medical records or internal clinical or administrative data systems. Under this option, PGPs that believe their claims-based quality performance results are too low for a particular measure would request from RTI a list of the beneficiaries in the denominator population for that measure who had not satisfied the numerator criteria according to the claims data analysis. PGPs could then search their medical records and internal clinical data systems to try to document additional health services data that would satisfy the numerator criteria for those beneficiaries. Note information used needs to be available to the healthcare provider at the point of care. After presenting evidence of satisfactory quality performance (positive numerator hits) for one or more of the individual beneficiaries on the list sent by RTI, the measured performance of the PGP would be increased accordingly for quality performance payment calculations. The "topping up" option will only be available for the numerator calculations for claims-based measures, however, not for denominators.

The portion of the numerator data derived from the topping up procedures will be subject to audit and validation in the same way as data for medical records quality measures, as specified in Section 4.8 below. PGPs will be required to achieve a 90% agreement rate between medical records or internal clinical systems data submitted for topping up claims-based measures and the medical records reviewed by IFMC staff as part of the audit and validation process. However, claims data are not subject to audit for quality measurement purposes under the demonstration since they are external administrative databases outside the direct control of the PGPs, they cannot be corrected by PGPs, and claims data may include services that beneficiaries received from non-PGP providers and are thus not auditable under the demonstration.

Hybrid Approach. PGPs will also have the option to use a hybrid approach for calculating claims-based measures similar to the procedures outlined below in Section 2.4.2, with the addition of using claims data to identify positive numerator hits. RTI would pull a random sample of 411 beneficiaries per claims-based quality measure, add an oversample of 20%, and identify the number that met the numerator criteria from claims data. Information on the remaining beneficiaries, who did not meet the numerator criteria according to the claims data, would then be forwarded to the PGP which would search its medical records or internal clinical or administrative data systems to identify additional positive numerator hits. The advantage of this sampling approach is that it would reduce the burden of work required for the PGP if manual medical records searching was conducted. The disadvantage of the sampling approach is that it would introduce the possibility of sampling error into the calculation of the PGP's measured performance on the quality measure. As a result, PGPs with electronic clinical or administrative systems may wish to opt for conducting the "topping up" procedure on the 100% beneficiary

population as described above, since that would avoid both the burden of manual medical records searching and the possibility of sampling error.

2.4.2 Medical Records or Hybrid Data Analysis Procedures

Medical records or hybrid analysis will also begin with the overall list of full-year assigned beneficiaries. RTI will use claims data to identify the full-year assigned beneficiaries for each PGP who meet the disease and other criteria for each of the condition modules (DM, HF, CAD, HTN, and PC) and are thus eligible for the denominator populations for the specific quality measures in each module. Denominators can be based on either a random sample of each module's beneficiaries or a PGP can opt to analyze the 100% population of full-year beneficiaries eligible for a given condition module. (This latter option is the method also used for claims-based quality measures. Some PGPs might opt for this approach when, for example, they have internal clinical or administrative data systems such as diabetes patient registries that include the relevant clinical data for the quality measures for all of the denominator beneficiaries.)

The samples of beneficiaries for analysis for each measure will be drawn in sequence from a single random sample of 615 beneficiaries identified by RTI through claims data as meeting the disease and other characteristics required for each of the first four overall condition module (DM, HF, CAD, and HTN). For the fifth condition module, PC, two separate random samples of 615 beneficiaries will be drawn, one for each quality measure (mammography and colorectal cancer screening), since these measures are defined by demographic characteristics that differ between the measures. The target sample size for statistical reliability will be 411 beneficiaries for each individual quality measure. PGPs will not be required to pull records for entirely new samples of 411 beneficiaries for each quality measure, but rather different subsets of the single random sample of 615 beneficiaries. The 50% oversampling is used to account for variations in the exclusions relevant for some individual measures within each overall condition module. Thus different subsets of the 615 beneficiaries per module may be used in some cases to reach the total 411 sample size required for each individual quality measure with the module's measure set.

A larger percentage oversampling may be used, if needed, to account for the exclusions relevant for quality measures included in some modules. If the entire population for a module is less than 615 beneficiaries, then the entire population will be used.

Denominator inclusion and exclusion criteria for some individual quality measures may mean that reaching the target sample size of 411 beneficiaries is not possible for some PGPs, even when all of their full-year assigned beneficiaries are considered. For example, measure HF-8 requires patients to have both HF and paroxysmal or chronic atrial fibrillation. Some PGPs may not have a total of 411 patients meeting those criteria. In that case the PGP's entire patient population eligible for the given measure will be used for the quality performance calculations.

Numerators can be calculated in two ways: 1) medical records-only; or 2) hybrid method. For the medical records-only method, the PGP will abstract medical records for all 411 beneficiaries selected for each measure (or the total available population if the PGP does not

have at least 411 who are eligible). Data will be recorded in the abstracting tool described below in Section 4, and forwarded to IFMC for review and processing.

For the hybrid method, PGPs may initially search internal clinical or administrative data systems that are available at the point of care to identify those of the 411 denominator beneficiaries who satisfy the numerator criteria. Then, for the remaining beneficiaries, their medical records will be abstracted using the same abstracting tool, to check for positive numerator hits that may have been missed by the data systems.

2.5 Weighting of Quality Measures by Types of Measurement Processes

As noted, the claims-based quality measures will have a weight of 4 in calculating the percentage of quality targets met. The medical records or hybrid quality measures will have a weight of 1. The percentage of the total weighted quality measures for which at least one quality performance target is met will determine the percentage of the maximum quality performance payment that will be made to the PGP.

2.6 Quality Measurement Phase-in Process, with Total Possible Weights Per Year

As noted, the 32 quality measures will be implemented by condition module at each PGP using a three-year phase-in. This plan is summarized in ***Table 2-3***.

Table 2-3
Quality measurement module phase-in schedule

Module Measure Sets	Performance Year 1 4/1/2005-3/31/2006	Performance Year 2 4/1/2006-3/31/2007	Performance Year 3 4/1/2007-3/31/2008
DM-1 through 10	X	X	X
HF-1 through 10		X	X
CAD-1 through 7		X	X
HTN-1 through 3			X
PC-5 and 6			X

As noted, this means that the total quality points available in each year, based on the weighting methodology, are: Year 1, 22 points; Year 2, 45 points; and Year 3, 53 points. However, in some years PGPs may only accrue a portion of the total possible quality points available. For example, the following scenario could occur for a PGP in one year: "At least one measurement target is met or exceeded for all of the Diabetes measures except for DM-7: Eye Exam." The impact of this scenario on the quality performance points earned by the PGP is illustrated in ***Table 2-4***. In this case, the PGP would earn 18 of the 22 possible points in the Diabetes module and its performance would be 82% for that module. In the first performance year this would mean that the PGP would earn 82% of the quality performance payment pool. In the second and third performance years the PGP's performance with regard to the other applicable condition modules would also have to be considered to calculate the overall percentage of the quality performance payment pool earned.

Table 2-4
Quality performance scenario for the diabetes module

Measures for the Diabetes Mellitus Module	Weight	Points Earned
DM-1 HbA1c Management	4	4
DM-2 HbA1c Control	1	1
DM-3 Blood Pressure Management	1	1
DM-4 Lipid Measurement	4	4
DM-5 LDL Cholesterol Level	1	1
DM-6 Urine Protein Testing	4	4
DM-7 Eye Exam	4	0
DM-8 Foot Exam	1	1
DM-9 Influenza Vaccination	1	1
DM-10 Pneumonia Vaccination	1	1
Totals	**22**	**18**

In a different scenario, if DM-10 is the only diabetes measure for which a target is not met, the total points accrued would be 21 of the 22 possible points, due to the different weights assigned to the two measures (DM-7 versus DM-10). In this new case, the PGP's performance would be 95% for the diabetes module. In the first performance year this would mean that the PGP would earn 95% of the quality performance payment pool. In the second and third performance years the PGP's performance with regard to the other applicable condition modules would also have to be considered to calculate the overall percentage of the quality performance payment pool earned.

2.7 Detailed Specifications for Denominators and Numerators for All Quality Measures

The DOQ project created four supporting documents for each of the PGP Demonstration's 32 quality measures. The supporting documents include: 1) Quality of Care Measure; 2) Analytic Flowchart; 3) Data Abstraction Definitions; and 4) Appendices for diagnosis and procedure codes. Each of these documents is described below. Drug tables were also created for performance measures requiring abstraction of specific classes of medications. A complete set of all four DOQ documents and the drug tables for each of the PGP quality measures is included in ***Appendix 2***.

For the claims-based PGP measures, the DOQ specifications have been adapted for claims measurement. Detailed specifications for the claims-based measures are included in Section 3 below.

2.7.1 DOQ Quality of Care Measure Documents

The DOQ Quality of Care Measure documents provide narrative descriptions of the quality measures. Specifically, these documents include: 1) Description (the measurement statement); 2) Source of the measure; 3) Clinical recommendations and rationale for the measure; 4) Denominator statement (population included for the measure); 5) Excluded population (those removed from the denominator for medical or patient reasons; 6) Numerator statement (population who received the therapy specific to the measure); and 7) Selected references. The following is an example of the Quality of Care Measure document for CAD-1 Antiplatelet Therapy:

CAD 1: Antiplatelet Therapy

Description: Percentage of patients with CAD who were prescribed antiplatelet therapy

Source of Measure: CMS/AMA Physician Consortium/ACC/AHA

Clinical Recommendation(s)/Rationale: Routine use of aspirin is recommended in the absence of contraindications. If contraindications exist other antiplatelet therapies may be substituted.[1-4]

(Class 1 Recommendation, Level-A Evidence) [1]

Denominator Statement: All patients with CAD (see appendix A.1) $\geq$ 18 years of age

- **Excluded population: Medical reasons***
  - Patients with one or more contraindications for not prescribing aspirin/clopidogrel (see appendix B.1)
    - Active bleeding in the previous six months which required hospitalization(s) or transfusion(s)
    - Aspirin/clopidogrel allergy/intolerance
  - Other reason documented by the practitioner for not prescribing aspirin/clopidogrel
    - Patients prescribed ticlopidine or dipyridamole (see table 18)
- **Excluded population: Patient reasons***

*Exclusions only applied if the patient did not receive antiplatelet therapy

Numerator Statement: Patients who were prescribed aspirin or clopidogrel therapy (see tables 1 and 9)

Selected References:

1. Gibbons RF, Abrams J, Chatterjee K, Daley J, Deedwania PC, Douglas JS, Ferguson TB Jr., Fihn SD, Fraker TD Jr., Gardin JM, O'Rourke RA, Pasternak RC, Williams SV. ACC/AHA 2002 guideline update for the management of patients with chronic stable angina: a report of the American College of Cardiology/American Heart Association Task Force on Practice

Guidelines (Committee to Update the 1999 Guidelines for the Management of Patients with Chronic Stable Angina). 2002.

2. Braunwald E., Antman EM, Beasley JW, Califf RM, Cheitlin MD, Hochman JS, Jones RH, Kereiakes D, Kupersmith J, Levin TN, Papine CJ, Schaeffer JW, Smith EE III, Steward DE, Theroux P. ACC/AHA 2002 guideline update for the management of patients with unstable angina and non-ST-segment elevation myocardial infarction: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Committee on the Management of Patients With Unstable Angina). 2002.
3. Ryan RJ, Antman EM, Brooks NH, et al. 1999 update: ACC/AHA guidelines for the management of patients with acute myocardial infarction. A report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Committee on Management of Acute Myocardial Infarction). *J AM Coll Cardiol.* 1999;34:890-911.
4. Eagle KA, Guyton RA, Davidoff R, et al. ACC/AHA guidelines for coronary artery bypass graft surgery: A report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Committee to Revise the 1991 Guidelines for Coronary Artery Bypass Graft Surgery). *J AM Coll Cardiol.* 1999;34:1262-1347.

2.7.2 DOQ Analytical Flowchart Documents

The DOQ Analytic Flowchart documents contain sets of rules and data elements necessary to calculate the quality measures. Instructions to determine inclusions and exclusions relevant to the numerator and/or denominator are included -- in both narrative and analytic language. Analytic language consists of the variable names assigned to each data element. Analysts are the intended users of these documents, for the purpose of programming analytic code. Drug tables and coding appendices are identified in these documents as well.

Specifically, these documents include: 1) Measure statement; 2) Denominator statement; 3) Denominator Inclusions (narrative); 4) Denominator Inclusions (variable name); 5) Denominator Exclusions (narrative); 6) Denominator Exclusions (variable name); 6) Numerator statement; 7) Numerator Inclusions (narrative); and 8) Numerator Inclusions (variable name). The following is an example of the Analytic Flowchart for measure CAD-1 Antiplatelet Therapy:

Antiplatelet Therapy (CAD-1): Percentage of patients with CAD who were prescribed antiplatelet therapy

Denominator: All patients with CAD ≥ 18 years of age

Denominator Inclusions

All patients (each unique patient identifier equals one case in the denominator) meeting the inclusion criteria (page 1)	Each unique [PATIENTID] = one case in the denominator **AND** Meeting inclusion criteria (page 1)

Denominator Exclusions (Exclusions only applied if the patient did not receive antiplatelet therapy)

Any visit where- Excluded for Medical Reasons: • patients with aspirin/clopidogrel contraindication [allergy/intolerance, active bleeding in the previous six months which required hospitalization(s) or transfusion(s)] • other reason documented by the practitioner for not prescribing aspirin/clopidogrel • patients prescribed ticlopidine or dipyridamole (see appendix B.1 and table 18) Excluded for Patient Reasons	[CADASPCLODRUGNO] = 1 (see appendix B.1) **OR** [CADASPCLODRUGNO] = 2 (see table 18) **OR** [CADASPCLODRUGNO] = 3

Numerator: Patients who were prescribed aspirin or clopidogrel therapy

Numerator Inclusions

Patients who were either prescribed aspirin or clopidogrel therapy during any clinic/office visit (see tables 1 and 9)	[CADASPCLODRUG] = 1 (see tables 1 and 9)

2.7.3 DOQ Data Abstraction Definitions

The DOQ Data Abstraction Definitions documents describe the data elements to be abstracted and used to calculate the quality measures. Each data element to be abstracted from medical records is described in narrative form as well as the assigned variable name. Detailed instructions for abstraction of each data element are described. The Data Abstraction Definitions provide a common set of guidelines for use by all medical records or clinical data systems abstractors to promote consistency of abstraction. However, the DOQ measures were designed only for use with medical records-based quality measures. Medicare claims-based measures used for the PGP demonstration use the same denominators and numerators, but the data are collected in different ways and with some different codes and exclusion rules, due to the nature of claims data and its differences from medical records data and internal PGP clinical and administrative data systems. As noted, detailed specifications for the PGP demonstration claims-based measures are included in Section 3 below.

The Definitions documents include both narrative responses and assigned valid values for all possible response options. Valid values are numerical equivalents assigned for each response option. In the following example for CAD-1 Antiplatelet Therapy, the instruction is to determine if the patient was prescribed aspirin or clopidogrel therapy during the measurement period. The two options for response are “yes” or “no”. The “yes” response has been assigned a valid value of one (1) and a “no” response a valid value of zero (0).

Synonyms of acceptable alternatives for the data elements are included, since there is variability in medical terminology used in medical record documentation. For example,

acceptable synonyms for coronary artery disease are arteriosclerotic cardiovascular disease, arteriosclerotic heart disease, atherosclerotic cardiovascular disease and coronary arteriosclerosis. Providing acceptable synonyms clarifies appropriate options for medical terminology that could be selected by the abstractors if found in the medical record.

Examples of unacceptable synonyms that may be found in the medical record are provided in the final column of a Data Abstraction Definitions document. For example, documentation of chest pain is not considered synonymous with documentation of coronary artery disease.

Specifically, the Data Abstraction Definitions documents include: 1) Data elements; 2) Variable names; 3) Instructions for abstraction of the data elements (with definitions); 4) Valid values; 5) Synonyms; and 6) Exclusions. The following is an example of the Data Abstraction Definitions document for CAD-1:

DATA ELEMENTS/ VARIABLE NAME	INSTRUCTIONS (DEFINITION,VALID VALUES)	SYNONYMS	EXCLUSIONS
Antiplatelet Therapy **[CADASPCLODRUG]** **[CADASPCLODRUGNO]**	Instruction: Determine if the patient was prescribed aspirin or clopidogrel therapy during the measurement period. **Yes (1):** Select this option if the patient was prescribed aspirin or clopidogrel therapy. **No (0):** Select this option if the patient was not prescribed aspirin or clopidogrel therapy. ▪ **Not prescribed for medical reasons (1):** Select this option if the patient was not prescribed aspirin or clopidogrel therapy for medical reasons. ▪ **Prescribed ticlopidine or dipyridamole (2):** Select this option if the patient was prescribed ticlopidine or dipyridamole. ▪ **Not prescribed for patient reasons (3):** Select this option if the patient was not prescribed aspirin or clopidogrel therapy for patient reasons. ▪ **Not prescribed-no reason documented (4):** Select this option if there is no reason documented for not prescribing aspirin or clopidogrel therapy.	**See drug list of aspirin containing agents (table 1), clopidogrel (table 9) and ticlopidine and dipyridamole (table 18)** **Medical reasons for not prescribing may include:** Active bleeding in the previous six months which required hospitalization(s) or transfusion(s), alcoholic liver damage, allergy or intolerance, anemia due to blood loss, angioedema due to aspirin, blood dyscrasia, cirrhosis, duodenal ulcer, end-stage liver disease, esophageal varices, fatty liver, gastric ulcer, gastritis, gastrojejunal ulcer, GI bleeding, G-J ulcer, hemorrhage, hepatic coma, hepatic failure, hepatic infarction, hepatitis, iron deficiency anemia, liver abscess, liver disease, liver failure, peptic ulcer, platelet abnormality, portal hypertension, pregnancy, PUD, thrombocytopenia, other reason documented by the practitioner for not prescribing aspirin or clopidogrel therapy	None

The variable names and valid values described in columns above refer to the computerized DOQ data abstraction tool that will be modified for the PGP demonstration and distributed to all of the participating PGPs. It is described in Section 4 below.

Documentation from most sources is allowed as support for a denominator exclusion or another component used to calculate the measure rate. The Exclusions column may in some cases contain instances for some data elements where a specific piece of documentation is unacceptable. The downloadable resources from CMS' DOQ-IT project provide codes that may be present in an electronic health record representing any of the data elements. The downloadable resources provide reference tables containing applicable standardized codes, including but not limited to ICD-9, CPT, and LOINC. The downloadable resources were prepared for DOQ-IT use and have not been altered to reflect the changes in measure specification requested by the PGP sites. Refer to respective measure specification appendices for the updated listing of codes.

2.7.4 DOQ Appendices for Diagnosis and Procedure Codes

Examples of different types of DOQ Appendices for diagnosis and procedure codes are included in ***Tables 2-5 and 2-6***. These codes are used to define inclusions and exclusions for the denominators and numerators of quality measures.

Table 2-5
ICD-9 and CPT codes used to define inclusions for CAD measures

Brief description	A.1 (ICD-9-CM)	A.2 (CPT)
CAD	414.00-414.07, 414.8, 414.9	
MI	410.00-410.92, 412	
Angina	411.0-411.89, 413.0-413.9	
Percutaneous Coronary Intervention (PCI)	V45.81, V45.82	33140, 92980-92982, 92984, 92995, 92996
CABG		33510-33514, 33516-33519, 33521-33523, 33533-33536

Table 2-6
ICD-9 Codes used to define exclusions for CAD measures

Brief description	B.1 (ICD-9-CM)
Hemorrhage	459.0
Liver disease	571.0-573.9
Esophageal varices	456.0, 456.20
Gastric ulcer	531.00-531.91
Duodenal ulcer disease	532.00-532.91
Gastrojejunal ulcer disease	534.00-534.91
Peptic ulcer disease	533.00-533.91
Iron deficiency anemia	280.0, 280.9
Adverse events with therapeutic use of aspirin	995.0 and E935.3, 995.1 and E935.3, 995.2 and E935.3
Adverse events with therapeutic use of other antiplatelets	995.0 and E934.8, 995.1 and E934.8, 995.2 and E934.8
Thrombocytopenia	287.3, 287.4, 287.5

2.7.5 Additional DOQ Elements

Drug tables were created for each class of medication to be abstracted, such as beta-blockers, NSAIDs or lipid lowering medications. They are also included in Appendix 2.

Three quality measures require an activity to be conducted at each visit (HTN-1, HF-3, and HF-4). They includes, for example, weighing heart failure patients during each of their primary care visits. For these measures the eligible visits will be defined through the following claims data process undertaken by RTI. First, Part B carrier claims will be used to identify visits with the appropriate CPT codes (from DOQ Appendix K contained in Appendix 2). The visits will then be restricted to those provided by primary care providers as defined in CMS provider specialty codes [family practice (08), general practice (01), internal medicine (11), geriatric medicine (38), physicians assistants (97), and nurse practitioners (50)]. The visits will then also be restricted to those with the PGP's EIN codes, so that only those visits that the PGP has direct access to and influence over will be counted in the denominator.

Technical specifications have also been developed which include downloadable resources that can be used for data extraction for DOQ quality measures from electronic health records (EHRs). As noted, these are available from CMS through the DOQ-IT project (note limitations mentioned in Section 2.7.3).

2.8 PGP Quality Measures Will Be Frozen for the 3-Year Duration of the Demonstration

The PGP quality measure specifications will remain constant for the entire 3-year duration of the PGP Demonstration. Updates will **not** be implemented at any point during the demonstration.

2.9 Quality Target Compliance Determination

Quality target compliance analysis will involve comparing the percentage compliance calculated for each measure with the threshold and improvement targets described above in Section 2.2. A PGP will be considered to have met the performance requirement for a quality measure whenever it meets at least one of the threshold or improvement targets set for that measure.

Records will be maintained for both the number and type of targets met for each quality measure for each PGP. Comparisons will be made across measures and across PGPs to analyze patterns in the number and types of quality targets achieved and not achieved.

2.10 Quality Performance Payment Determination

The quality performance payment calculation will begin with the maximum quality performance payment figure provided from the cost performance payment calculation, as illustrated in Figure 1-1 in Section 1. Next, the total quality measure points earned in a given performance year will be calculated, with claims-based measures counting 4 points and medical records-based measures counting 1 point, as described in Section 2.5. Points earned will be divided by total points possible to determine the percentage of the maximum quality

performance payment earned by the PGP for the given performance year. That figure is the actual quality performance for the PGP.

The actual quality performance payment is added to the cost performance payment to determine the preliminary earned performance payment for the given performance year. The additional calculations indicated in Figure 1-1 are then performed to determine the performance payment to be received by the PGP at the annual settlement.

SECTION 3
PROCEDURES FOR CLAIMS-BASED ANALYSIS OF QUALITY MEASURES

This section includes specifications for measuring the 7 quality indicators calculated using Medicare claims data. As noted, the specifications are based on those developed by CMS for the DOQ Project, with some modifications for claims data measurement. The claims data analyses described in this chapter will be conducted by RTI staff once per year, as part of the process of determining the number of quality targets met by each PGP.

3.1 Claims Data Cleaning Procedures

Three of the seven types of Medicare claims data will be used for the claims-based quality analysis: 1) Part B Carrier (Physician/Supplier) claims; 2) Outpatient claims; and 3) Inpatient claims. They are viewed as having more reliable data on diagnoses, as containing the procedure codes relevant to the PGP demonstration quality measures, and also as representing the vast majority of claims. For Part B Carrier claims, diagnosis data will only be taken used from claims with SOURCE codes 1-5, which indicate that the provider is considered a reliable source of diagnosis data. The other four types of Medicare claims (SNF, Home Health, DME, and Hospice) will not be used in the quality analysis.

Denied line items and denied claims will be selectively deleted from the claims databases using the standard approaches that RTI uses for other CMS projects. Those methods have been adapted in earlier planning efforts to the PGP demonstration.

Most quality measures will be calculated using claims data for a single 12-month period (either a calendar year for the base year or a performance year running from April through March). For the two-year measures, data from prior years will also be used.

During the PGP demonstration, the standard cut-off point for pulling claims will be 6 months after the end of the 12-month period to be analyzed. At that point, the claims data are considered to be substantially complete.

As previously specified for the PGP demonstration, claims for services provided to beneficiaries after the first date of hospice admission will be deleted from the claims database. The PGP demonstration truncates a beneficiary's participation in the demonstration on the first day of the month following the date of first hospice admission.

3.2 Variables to be Used by Types of Claims

The claims-based quality measures will be calculated using a limited set of the variables available in Medicare claims files. The variables used by type of claims are listed below, with their field numbers and variable definitions from the Medicare National Claims History data dictionary:

Inpatient Claims

56. Claim Principal Diagnosis Code
185. Claim Diagnosis Code
187. Claim Procedure Code
210. Revenue Center HCFA Common Procedure Coding System Code

Outpatient Claims

56. Claim Principal Diagnosis Code
143. Claim Diagnosis Code
146. Claim Procedure Code
169. Revenue Center HCFA Common Procedure Coding System Code

Part B Carrier (Physician/Supplier) Claims

49. Claim Principal Diagnosis Code
100. Claim Diagnosis Code
111. Line HCFA Provider Specialty Code
122. Line HCPCS Code
150. Line Diagnosis Code

3.3 Calculating Denominators and Numerators for the Diabetes Claims-Based Measures DM-1, DM-4, DM-6, and DM-7

All four claims-based DM measures will be calculated using the same denominator definition:

The denominator is defined as all patients in the 12-month measurement period with DM who were ≥18 and ≤75 years old on the first day of the 12-month measurement period. DM status is defined as a patient with at least **two** claims, including Inpatient, Outpatient, or Part B Carrier (Physician/Supplier) claims, with **any** ICD-9 diagnosis code indicating the patient had DM. The eligible codes are as follows:

- ICD-9 diagnosis codes for DM: 250.00-250.93, 357.2, 362.01, 362.02, 366.41, 648.00-648.04

DM-1: HbA1c Management is the first claims-based DM quality measure. It is the percentage of DM patients with one or more A1c test(s).

1. Denominator is defined above.

2. Numerator is defined as all DM denominator patients who received at least one A1c test during the 12-month measurement period. The A1c test requirement can **only** be satisfied using **one** CPT code, which can be found on any Inpatient, Outpatient , or Part B Carrier (Physician/Supplier) claim:

    - CPT code: 83036

DM-4 Lipid Measurement is the second claims-based DM quality measure. It is the percentage of DM patients with at least one LDL cholesterol test.

1. Denominator is defined above.

2. Numerator is defined as all DM denominator patients who received at least one LDL test during the 12-month measurement period. The LDL test requirement can be satisfied using any of the following CPT codes, on any Inpatient, Outpatient, or Part B Carrier (Physician/Supplier) claim:

    - CPT codes: 80061, 83721, 83716

DM-6 Urine Protein Testing is the third claims-based DM quality measure. It is the percentage of DM patients with at least one test for microalbumin during the 12-month measurement period, or who had evidence of medical attention for existing nephropathy (diagnosis of nephropathy or documentation of microalbuminuria or albuminuria).

1. Denominator is defined above.

2. Numerator is defined as all DM patients who received at least one test for microalbumin during the 12-month measurement period, or had evidence of medical attention for nephropathy during the 12-month measurement period. The these requirements can be satisfied using **any** of the following ICD-9 diagnosis or CPT codes, on any Inpatient, Outpatient, or Part B Carrier (Physician/Supplier) claim:

    - ICD-9 diagnosis codes: 250.4x, 403.xx, 404xx, 405.01, 405.11, 405.91, 581.81, 582.9, 583.81, 584–586, 588.x, 588.8x, 753.0, 753.1x, 791.0, V42.0, V45.1, V56.x

    - CPT codes: 36800, 36810, 36815, 50300, 50340, 50360, 50365, 50370, 50380, 90920, 90921, 90924, 90925, 90935, 90937, 90945, 90947, 90989, 90993, 90997, 90999, 82042, 82043, 82044, 84155, 84156, 84160, 84165 with 81050, 81000-81003, 81005

DM-7 Eye Exam is the fourth claims-based DM quality measure. It is the percentage of DM patients who received a dilated eye exam or evaluation of retinal photographs by an optometrist or ophthalmologist during the 12-month measurement period, or during the previous 12 months. (This measure is adapted for claims-based measurement.)

1. Denominator is defined above.

2. Numerator is defined as all DM patients who received a dilated eye exam or evaluation of retinal photographs by an optometrist or ophthalmologist during either the 12-month measurement period or the previous 12 months. This requirement can be satisfied by **any** of the following ICD-9 **procedure** codes or CPT codes, on any Inpatient, Outpatient, or Part B Carrier (Physician/Supplier) claim:

    - ICD-9 **procedure** codes: 14.1-14.5, 14.9, 95.02-95.04, 95.11, 95.12, 95.16

- CPT codes: 67101, 67105, 67107-67108, 67110, 67112, 67141, 67145, 67208, 67210, 67218, 67227, 67228, 92002, 92004, 92012, 92014, 92018, 92019, 92225, 92226, 92230, 92235, 92240, 92250, 92260, 92287

- To identify optometrists or ophthalmologists as the providers, for Part B Carrier (Physician/Supplier) claims, the values in the Carrier Line Provider Specialty Code field must be either '41' (optometrist) or '18' (ophthalmology). However, these specific types of providers cannot be identified for Inpatient or Outpatient claims, so all Inpatient and Outpatient claims with the above ICD-9 procedure codes or CPT codes will count as numerator inclusions.

3.4 Calculating the Denominator and Numerator for Claims-Based Measure HF-2

HF-2: Left Ventricular Function (LVF) Testing is the claims-based HF quality measure. It is the percentage of HF patients hospitalized during the 12-month measurement period with a principal diagnosis of HF who also had LVF testing during the 12-month measurement period.

1. Denominator is defined as all HF patients hospitalized in the 12-month measurement period with a principal diagnosis of HF who were also ≥18 years old on the first day of the 12-month measurement period.

   HF status is defined as a patient with at least **two** claims, including Inpatient, Outpatient, or Part B Carrier (Physician/Supplier) claims, with **any** ICD-9 diagnosis code indicating the patient had HF. The eligible codes are as follows:

   - ICD-9 diagnosis codes: 398.91, 402.01, 402.11, 402.91, 404.01, 404.03, 404.11, 404.13, 404.91, 404.93, 428.0, 428.1, 428.20-428.23, 428.30-428.33, 428.40-428.43, 428.9

   HF patients hospitalized with a principal diagnosis of HF will be defined to include **only** patients with at least one **Inpatient** claim with a Principal Diagnosis including an ICD-9 diagnosis code for HF. The eligible ICD-9 codes are as above.

   One exclusion for this denominator is status post heart transplant, ICD-9 diagnosis code V42.1.

2. Numerator is defined as all denominator patients who received LVF testing during the 12-month measurement period. The LVF test requirement can be satisfied using **any** of the following CPT codes on **any** Inpatient, Outpatient, or Part B Carrier (Physician/Supplier) claim:

   - CPT codes: 78414, 78468, 78472, 78473, 78480, 78481, 78483, 78494, 93303, 93304, 93307, 93308, 93312, 93314, 93315, 93317, 93350, 93543, 93555

3.5 Calculating the Denominator and Numerator for Claims-Based Measure CAD-5

CAD-5: Lipid Profile is the claims-based CAD quality measure. It is the percentage of CAD patients receiving at least one lipid profile test during the 12-month measurement period.

1. Denominator is defined as all patients in the 12-month measurement period with CAD who were ≥18 years old on the first day of the 12-month measurement period. CAD is defined as a patient with at least **two** claims, including Inpatient, Outpatient, or Part B Carrier (Physician/Supplier) claims, with **any** ICD-9 diagnosis code or CPT code indicating the patient had CAD. The eligible codes are as follows:

   - ICD-9 diagnosis codes: 414.00–414.07, 414.8, 414.9, 410.00–410.92, 412, V45.81, V45.82, 411.0–411.89, 413.0–413.9

   - CPT codes: 33140, 92980, 92981, 92982, 92984, 92995, 92996, 33510, 33511, 33512, 33513, 33514, 33516, 33517, 33518, 33519, 33521, 33522, 33523, 33533, 33534, 33535, 33536

2. Numerator is defined as all denominator CAD patients who received at least one lipid profile test (or all of the component tests individually) during the 12-month measurement period. The lipid profile test requirement can be satisfied using any of the three following combinations of CPT codes on any Inpatient, Outpatient, or Part B Carrier (Physician/Supplier) claim:

   - CPT code: 80061 (lipid panel)

     or

   - CPT codes: 83721 **and** 82465 **and** 83718 **and** 84478 (all component tests individually)

     or

   - CPT codes: 83716 **and** 82465 **and** 83718 **and** 84478 (all component tests individually)

3.6 Calculating the Denominator and Numerator for Claims-Based Measure PC-5

PC-5: Breast Cancer Screening is claims-based PC quality measure. It is the percentage of women who had a mammogram during the 12-month measurement period or the previous 12-month period.

1. Denominator is initially defined as all female patients who were ≥50 and ≤69 years old on the first day of the 12-month measurement period.

   Denominator **exclusions**: Delete patients from the denominator population if they had **any** of the following ICD-9 **procedure** codes or CPT codes on **any** Inpatient,

Outpatient or Part B Carrier (Physician/Supplier) claim during the 12-month measurement period or the previous 12 months:

- ICD-9 **procedure** codes: 85.42, 85.44, 85.46, 85.48. For the following ICD-9 procedure codes, require two separate occurrences of any of: 85.41, 85.43, 85.45, 85.47

- CPT codes: For the following CPT codes, require two separate occurrences of any of: 19180, 19200, 19220, 19240

2. Numerator is defined as all denominator patients who received a mammogram during the 12-month measurement period or the previous 12 months. This test requirement can be satisfied by **any** of the following ICD-9 **diagnosis** codes, ICD-9 **procedure** codes, CPT codes, or HCPCS codes on **any** Inpatient, Outpatient, or Part B Carrier (Physician/Supplier) claim during the 12-month measurement period or the previous 12 months:

   - ICD-9 **diagnosis** codes: V76.11, V76.12

   - ICD-9 **procedure** codes: 87.36, 87.37

   - CPT or HCPCS codes : 76082, 76083, 76085, 76090, 76091, 76092, G0202, G0204, G0206, G0236

3.7 Procedures for Claims Data Checking and Validation

In addition to the standard claims data quality checks being applied to the entire PGP demonstration, the following procedures will be used to check the validity of claims-based quality measures.

Observation counts for each type of claim file (Inpatient, Outpatient, and Part B Carrier) will be created and documented for all participating PGPs to ensure that each PGP is correctly represented in the Medicare claim system. This procedure will check that correct identification numbers are used and dates have been filtered correctly.

Claims files will be screened to ensure that the relevant fields contain valid data. Diagnosis and procedure code fields will be checked against known codes to ensure that the claims data contain recognized codes. The percent of diagnosis and procedure codes recognized will be documented and maintained for each period.

RTI will check the quality measures calculated for each PGP against data from prior demonstration and against data from other PGPs, to determine if the observed levels are reasonable. This will provide a check against coding problems at the PGPs. If unusual levels are observed for individual quality measures, frequencies of the codes used (or not used) to calculate the quality performance percentages will be analyzed to find potential coding errors. Baseline data will be generated for codes that are used and compared to those used by other PGPs, those used over time, and those used for other claims-based quality measures.

SECTION 4
PROCEDURES FOR MEDICAL RECORD-BASED OR HYBRID ANALYSIS OF QUALITY MEASURES

4.1 Refining the DOQ Abstraction Tool, Developing User's Guide for PGPs

The DOQ Abstraction Tool will be the electronic data collection tool used in the PGP demonstration abstracting data from medical records or PGP internal clinical data systems for quality measurement. The version of the abstraction tool used by PGPs will be tailored specifically to meet the needs of the PGP demonstration. A complete list of the variables collected by the abstraction tool is included in Appendix 4.

The abstraction tool will be pre-populated with each beneficiaries' available demographic information, visit data, laboratory test data, vaccinations, and other data from Medicare claims information supplied by RTI. The tool and pre-populated data will be distributed to each participating group by IFMC. After abstraction has been completed, the PGP will transmit the tool's database to IFMC for data clean-up and validation. The data will then be transmitted to RTI for analysis and determination of PGP performance payments.

The abstraction tool is designed for on-site medical record abstraction. It includes a Visual Basic interface and an Access database to house the data. The abstraction tool also has a number of additional features, including summary reports, data completeness and consistency checks, and help functions to assist with abstraction guidelines. The abstraction tool facilitates data entry by employing edits and skip logic to minimize entry time and errors.

The abstraction tool can be refined to allow for data entry for additional clinical conditions selected by the user, so that data for any combination of clinical conditions can be collected. This allows flexibility for PGPs that may wish to collect additional data, beyond the required PGP Demonstration quality measures

Importing Data

Although the abstraction tool will not support direct interface with an electronic medical record (EMR), or directly import data from other databases, documentation of the database structure, expected values, lengths, types, and relationships will be provided in detail to the participating PGPs. This information is included in Appendix 4. This will allow the PGPs to write software programs to import data from their EMRs or other clinical systems into the abstraction database. PGPs will need to use a "push" method to import their data into the database. They will need to connect to the database and use a program or algorithm to "push" their data into the database. The abstraction tool will have no ability to "pull" data in from a PGP's data files or data systems. All values from PGPs' data systems that do not include the expected values for each field in the abstraction tool must be converted to the value format outlined in the database structure presented in Appendix 4.

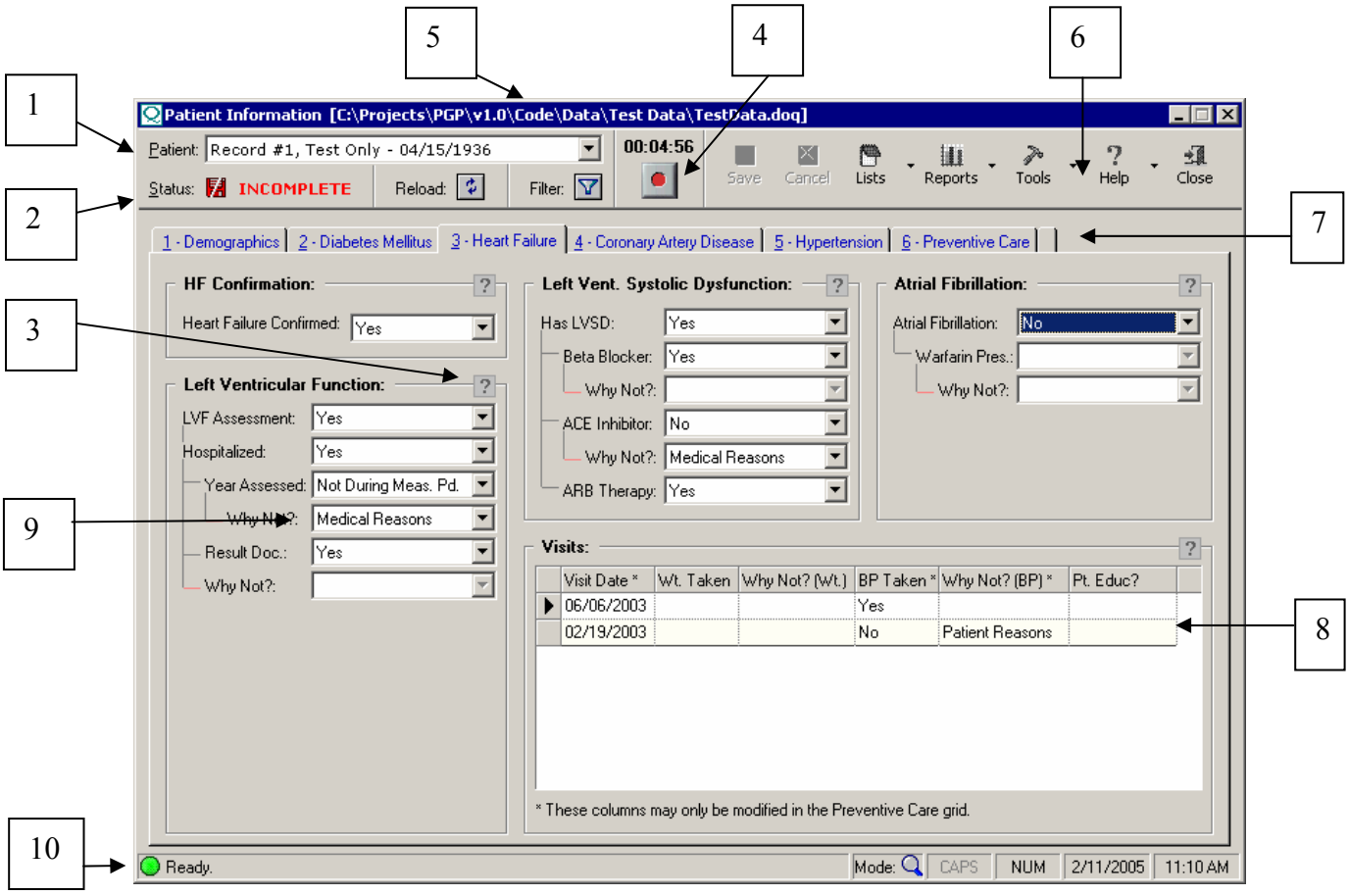
Reporting

The abstraction tool has several standard reports for data management, including patient listings and case summaries by patient. The tool will also be refined to allow for export of patient lists to an Excel spreadsheet. This will allow PGPs to export demographic information and perform other tasks that may facilitate care coordination or other demonstration-related interventions.

Documentation

A user's guide for the abstraction tool will be provided to each PGP. It will include functionality instructions as well as full documentation of the database structure. The interface overview screenshot provided below includes an introduction to the features and functionality of the abstraction tool. It illustrates how users access the data elements required for analysis of the medical records-based quality measures. As noted, an overview of the database structure is included in Appendix 4.

Interface Overview



1. **List of Patients**—List of all patients in the database. The list is sorted by patient's last name. To display all the information for a patient, select his or her name from the list using the mouse or keyboard.

2. **Data Status**—Displays whether the patient's data is complete or not. The tool allows the user to save the patient's data even if it is incomplete.

3. **"What's This" Button**—This button provides a quick reference for the element or set of elements that it represents. The information displayed in the help screen shown when this button is clicked is taken from the data definition document.

4. **Timer**—This button allows the user to stop and start the timer. The total time for abstracting data for the selected patient is displayed on top of the button.

5. **Title Bar**—The title bar displays the name of the application and the path and filename of the database that is currently in use.

6. **Menus**—Allow the user to perform various tasks, including maintaining users, viewing reports, and setting preferences.

7. **Tab Dialog**—Groups the controls by condition module. Enables the user to move from one tab to another. The Tab Dialog is disabled if no patient is selected.

8. **Grid**—The grid allows the user to enter multiple records of a patient's visits or laboratory test results.

9. **Dropdown List**—This allows the user to select an appropriate value that corresponds to an abstracted data element.

10. **Status Bar**—Displays the current program and user activity.

4.2 Training and Technical Assistance for PGPs

Training for medical record abstracting using the abstraction tool will be conducted via WebEx. WebEx is an Internet-based global conferencing tool that allows remote sites to attend meetings and view demonstrations in real time. Participants join meetings by logging onto a predetermined web site and calling a conference phone number provided.

IFMC will provide at least two training sessions for participating PGPs. Training will include both instruction on using the abstraction tool and on methods for abstracting medical records efficiently using the tool. IFMC will post a recorded WebEx training session on its website so that training of new employees or refresher training can occur at the PGPs at any time.

IFMC will provide technical assistance for participating PGPs in the following areas:

- Installation and use of the abstraction tool
- Use of QualityNet Exchange for transmitting data from PGPs to IFMC

- Database structure of the abstraction tool and guidance on EMR or clinical systems interfacing and data uploading
- Annual upgrades for the abstraction tool and database; IFMC will distribute the new databases along with any updates to the abstraction tool to each PGP each year

RTI and IFMC will pre-populate the Abstraction Tool provided to each PGP with available data on the beneficiaries selected for medical records abstracting. This is intended to facilitate the abstraction process at the PGPs. The pre-populated data will include demographic information from the Medicare Denominator file, selected claims data such as EIN numbers for PGPs with multiple practices, and dates of laboratory tests included in quality measure definitions.

In addition, previously abstracted medical information available for beneficiaries that are selected for a second time for medical records abstracting in subsequent years will also be pre-populated into the abstraction tool databases sent to the PGPs each year.

4.3 Procedures for Reporting Medical Records Data from PGPs to IFMC through QNET

QualityNet Exchange (QNET) is a CMS-approved site for secure communications and data exchange between two or more entities exchanging private health information (PHI). It is designed to comply with HIPAA regulations regarding electronic file exchange.

QNET contains several layers of security. Users log into QNET with a Login ID and password issued after they have completed QNET registration. Data transmitted to or from the user's computer through QNET are encrypted. The encryption follows the data from the user's computer to the application server and database, where it is stored in its protected state. The data remain on the QNET database until accessed by the intended recipient, at which time it is automatically decrypted.

Several layers of database security also exist in QNET, such as role-based security. Each QNET user has a specific role, or roles, assigned to them by the application which allow them access only to the features, functions, and data they need to access.

Minimum System Requirements for QNET

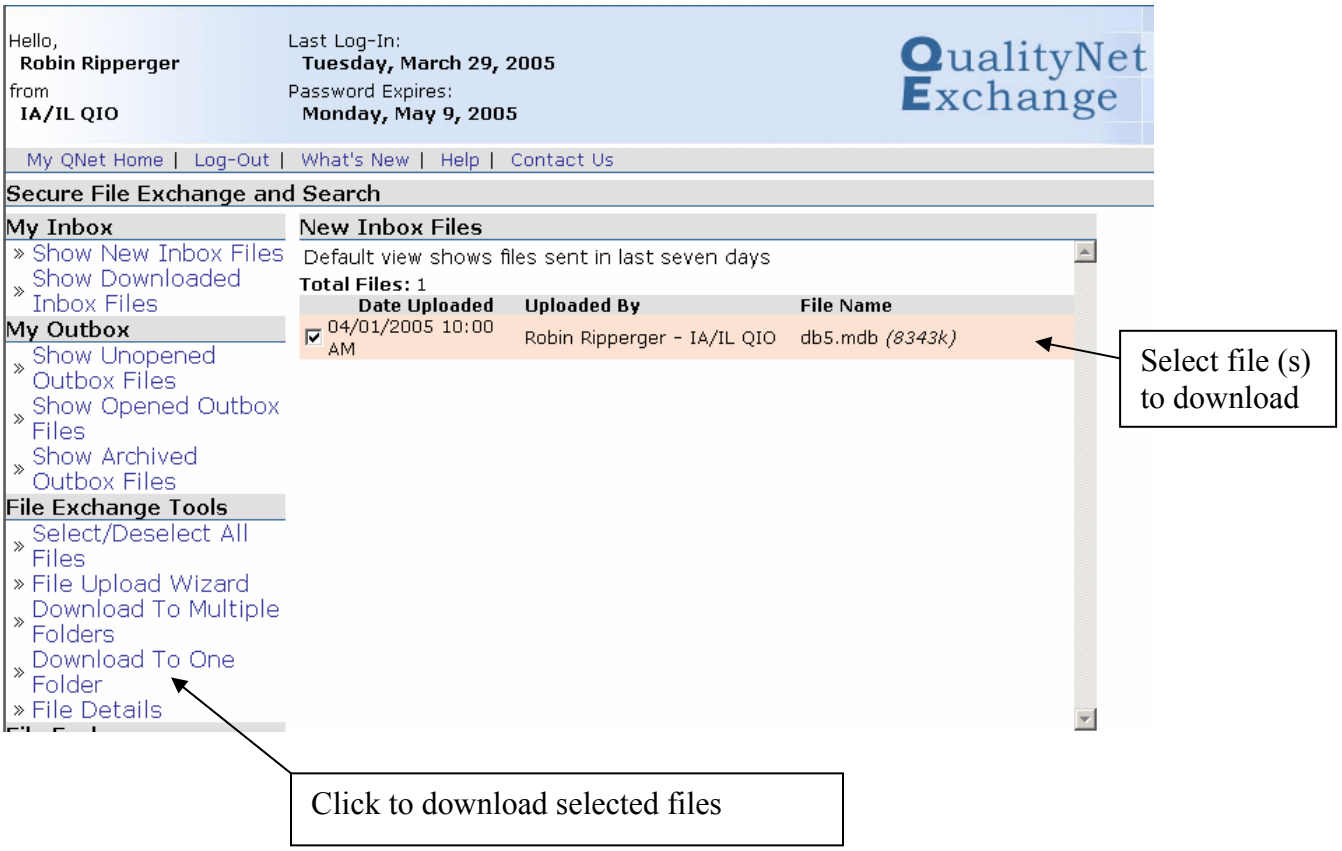
The minimum system requirements for QNET are listed below. As is evident, they are well within the common specifications for personal computers currently in use for most PGPs. The requirements are:

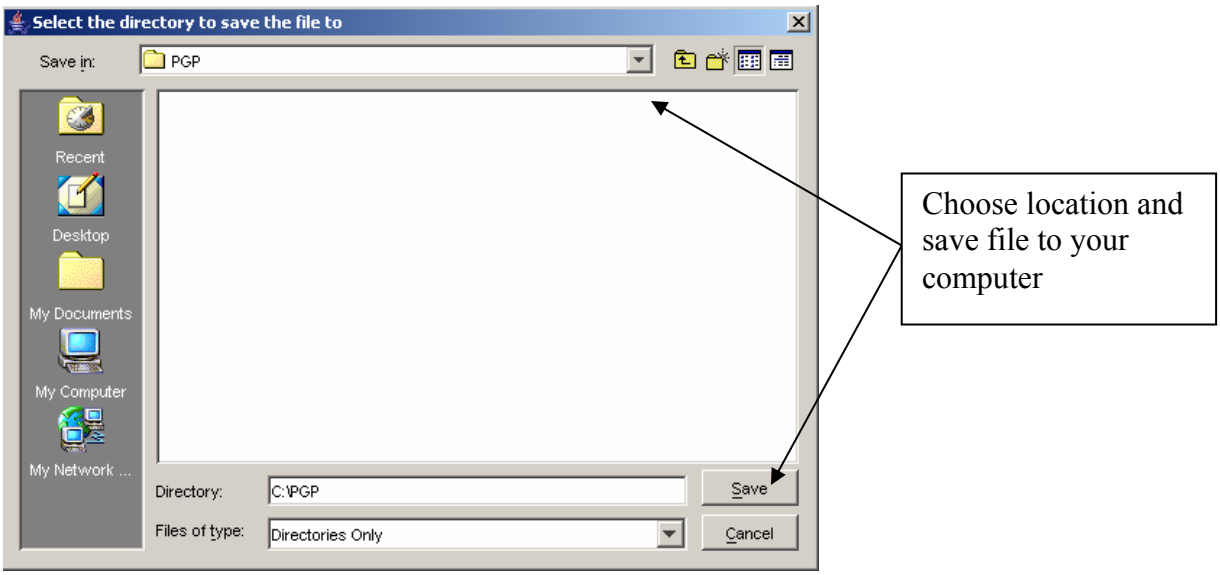
- Hardware: A minimum of a 166 MHz processor (Pentium II 233 MHz or better recommended) with a minimum of 125MB free disk space
- Operating System: Windows 2000 with Service Pack 4 or Windows XP with Service Pack 2
- Memory: 32 MB of RAM minimum (64MB recommended)

- Other: Internet access and 33.6 kbps modem minimum (high speed connection of 128 kbps recommended)

Downloading Files via QNET

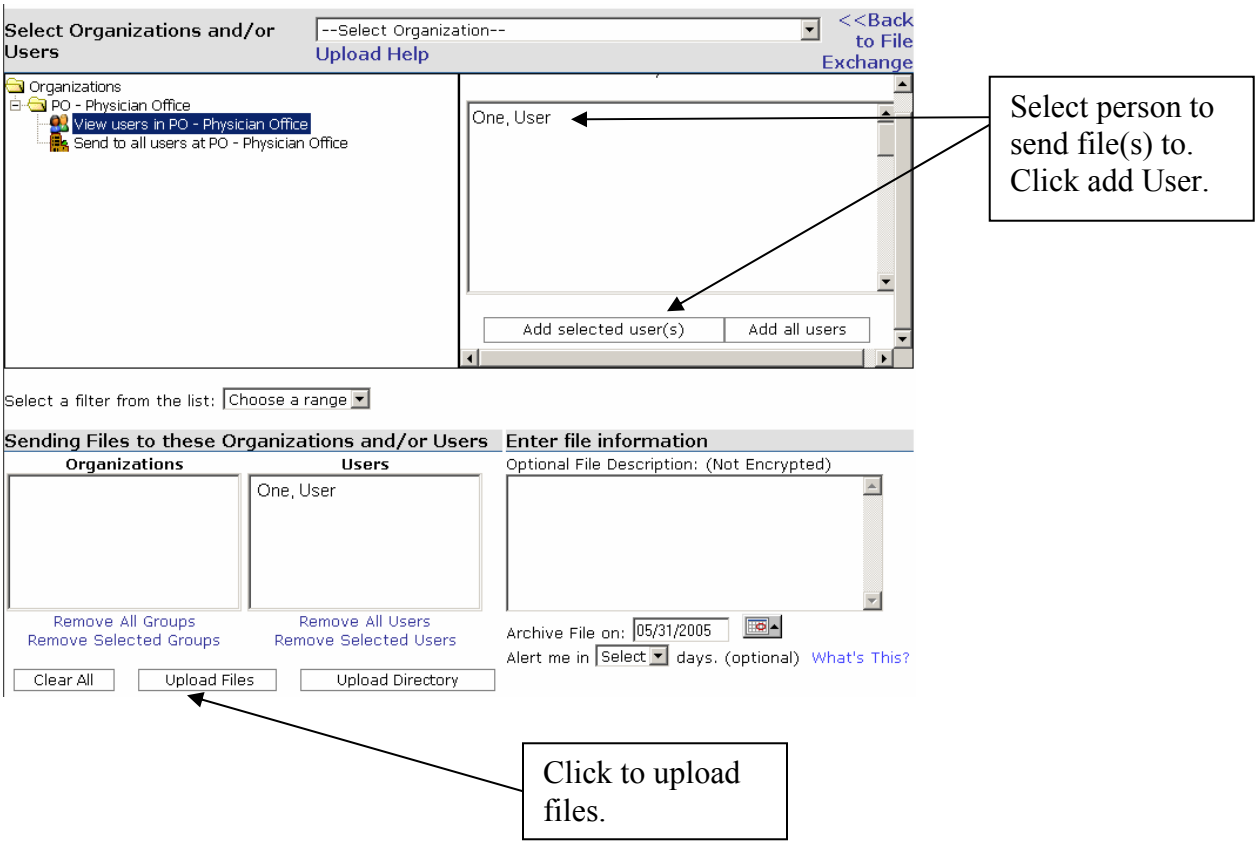
QNET operates in a manner similar to email attachments. To receive files the user selects a file to download and then clicks the "download to one folder" link. This will download the file to a location chosen on the user's computer. These procedures are illustrated in the QNET interface screenshots shown below:

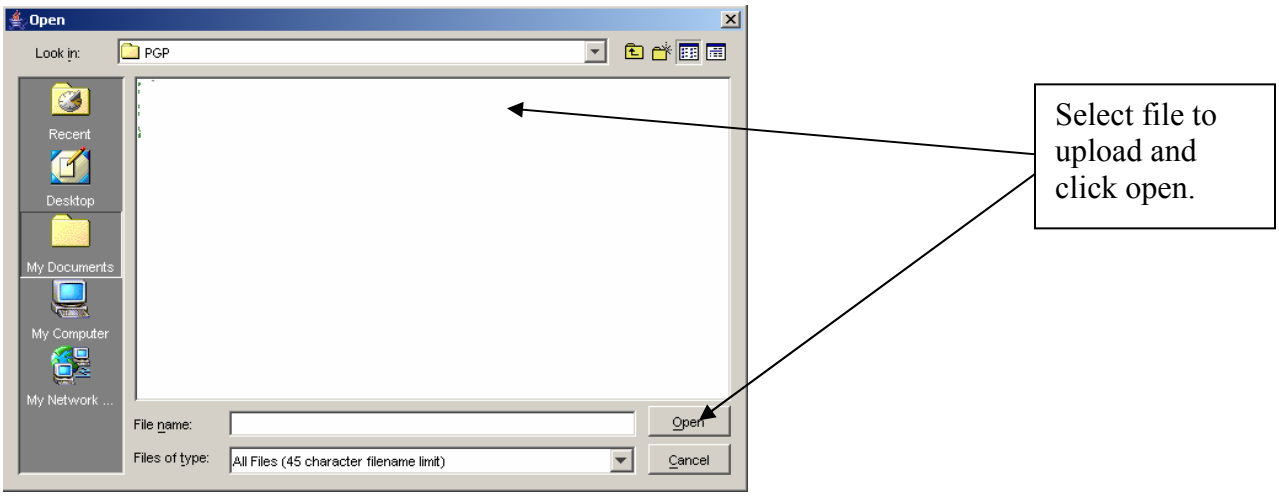




Uploading Files via QNET

To upload files, the intended recipient is first chosen from the list of available users. Next, click to upload files. A box will open to select the files to be sent. Select the files and choose Open to send the files. These procedures are illustrated in the QNET interface screenshots shown below:





4.4 QNET Registration Process

QNET requires a registration process to ensure that only authorized personnel have access to PHI. Each person requesting access to QNET must complete the registration process.

Administrator Account

To register as the QNET Administrator for an organization, the following steps need to be completed:

1. Request a copy of the QNET Administrator Registration Form and instructions from IFMC, and complete all of the applicable fields. A copy of this Registration Form and instructions is included in Appendix 5.

2. The person applying to be the QNET Administrator, must sign and date the form in the presence of a Notary Public, obtaining the Notary's signature and seal on the form. The highest level executive at the applicant's location must complete and sign the QNET Administrator Authorization form, which is attached to the Quality Net Exchange Administrator Registration Form.

3. Mail the original completed QNET Registration Form and the QNET Administrator Authorization form to IFMC at the following address.

   PGP Demonstration Project
   Quality NET Help Desk
   6000 Westown Parkway, Suite 350E
   West Des Moines, IA 50266

4. The QualityNet Help Desk will process the registration form. The applicant will be notified by email that the registration process is complete and that the QNET Web site is accessible. The QNET Administrator or designated staff will provide a Log-In ID and initial password to access the QNET site.

User Account

To register as a QNET User, the following steps need to be completed:

1. Notify the QNET Administrator to submit a request for a new QNET user.

2. The QNET Administrator or designated staff will complete an online registration form.

3. The person applying to be a QNET Non-Administrator User must sign and date a printed copy of the registration form in the presence of a Notary Public, obtaining the Notary's signature and seal on the form.

4. Mail the original notarized registration form to the QualityNet Help Desk at the address above in the instructions for the Administrator account application.

5. The QualityNet Help Desk will process the registration form. The applicant will be notified by email when the registration process is complete and the QNET Web site is accessible.

6. The QNET Administrator or designated staff will provide an initial Log-In ID and initial password to access the QNET site.

4.5 IFMC Procedures to Review Data for Accuracy and Completeness

Each year, after medical record abstraction has been completed by the PGP sites, they will transmit their medical records data to IFMC. IFMC will perform data cleanup and reconciliation for each PGP's database. The databases from all PGP sites will then be merged and transmitted to RTI for analysis, quality target performance assessment, and data warehousing. Each original PGP database and the merged database will also be archived at IFMC as a backup.

The abstraction tool has edits built into the program to minimize abstraction errors. This will enable participating PGPs to detect and correct most errors at the time of data abstraction. However, data that are imported from the PGP directly into the database may not be analyzed by this program. Therefore, upon receipt of abstracted data from the PGPs, IFMC will process the data through a data cleanup algorithm to further assess data accuracy and completeness. The data cleanup routine will check for any values that do not follow the expected values, appropriate parent/child relationships, and for any records that have been transmitted incomplete. It will also detect any database corruption issues that may arise from transmission or other factors. Any inconsistencies identified through this process will be reconciled with the PGP data representative before the data are sent on to RTI for analysis.

4.6 Procedures for Transmitting Medical Record Data from IFMC to RTI Through QNET

IFMC will use the same QNET system described in Section 4.3 to transfer the medical record data to RTI for analysis and data warehousing.

If difficulties arise in using QNET, for any of the demonstration participants, a back-up procedure is available. It involves downloading the data to CD-ROMs, encrypting them, and then sending them to their intended recipients by Federal Express.

4.7 Technical Assistance to PGPs Ongoing

Technical assistance for medical records abstraction and data transmission will be provided to participating PGPs throughout the demonstration. IFMC staff will be available for telephonic technical assistance. The suggested IFMC contact person for each type of assistance that may be needed is noted below:

Inquiries regarding:	**Robin Ripperger (515) 223-2125**	**Sherry Grund (515) 223-2112**
Measure Specifications		X
Abstraction Tool	X	
Transfer of Data to IFMC	X	
Audit Process & Results		X

4.8 Audit and Validation

For audit and validation of medical record data, a random sample of 30 beneficiaries whose medical records were abstracted by the PGP will be selected from the beneficiaries previously selected for abstracting for each condition module. ***Table 4-1*** provides a quantitative picture of the audit sample for each measurement year

Table 4-1
PGP medical record audit samples by condition module and performance year

Condition Module Measure Sets	Performance Year 1 4/1/2005-3/31/2006	Performance Year 2 4/1/2006-3/31/2007	Performance Year 3 4/1/2007-3/31/2008
DM-1 through 10	30	30	30
HF-1 through 10		30	30
CAD-1 through 7		30	30
HTN-1 through 3			30
PC-5 and 6			30
Total Audit Sample	30	90	150

The random sample process may need to be supplemented for some quality measures that may have low frequencies of beneficiaries that meet the denominator inclusion criteria. The following example indicates the adjusted methodology that will be used:

> Example: HF-8 (Warfarin Therapy for Patients with Atrial Fibrillation) -- For this measure it is likely that for some PGPs the frequency of patients with heart failure who also have paroxysmal or chronic atrial fibrillation will be small. When this is the situation, additional cases will be selected to meet the 30 case goal for audit and validation.

The audit process will be used to determine eligibility for payment for the medical records-based measures. However, it will only be used for information and evaluation purposes for the claims-based measures, not for determining eligibility for performance payments under the demonstration. There are two reasons for this distinction. First, medical records and PGP clinical or administrative systems are internal databases under the control of the PGPs, and correctable by them as part of the audit process, while Medicare claims are an external database from the PGP perspective, and not correctable by them. Second, claims data may include records for services provided to beneficiaries by non-PGP providers, that are not auditable under the demonstration.

The audit process will include up to three phases, depending on the results of the first two phases. Although each sample will include 30 beneficiaries per module, only the first eight beneficiaries' medical records will be audited for mismatches during the first phase of the audit. A mismatch represents a discrepancy between the numerator inclusions or denominator exclusions in the data submitted by the PGP and IFMC's determination of their appropriateness based on supporting medical records information submitted by the PGP. If there are no mismatches, the remaining 22 of the 30 beneficiaries' records will <u>not</u> be audited. If there are mismatches, the second phase of the audit will occur, and the other 22 beneficiaries' records will be audited. The third phase, involving corrective action, is only undertaken if mismatches are found in more than 10% of the medical records in phase two. The following steps describe the three audit phases in more detail:

<u>Phase 1</u>

Step 1: Random sample of 30 beneficiaries per condition module selected by RTI for the audit sample (may be supplemented by 30 additional beneficiaries for some individual quality measures with small numbers of qualifying beneficiaries, as needed)

Step 2: Medical records data for beneficiaries included in the audit sample sent via QNET from RTI to PGPs and IFMC

Step 3: PGPs send portions of the selected beneficiaries' medical records in hardcopy to IFMC to support each numerator inclusion and denominator exclusion for each quality measure. Information available to the healthcare provider at the point of care is considered appropriate to use to satisfy documentation requirements. Any written note or document included in the medical record that includes all of

the necessary data required to fully document a numerator inclusion or denominator exclusion will be considered acceptable.

Example: to validate a numerator inclusion for a beneficiary for measure CAD-2 (Drug Therapy for Lowering LDL Cholesterol), the PGP would need to provide documentation noting the patient was prescribed a lipid-lowering agent.

Example: to validate a denominator exclusion for a beneficiary for CAD-2, the PGP would need to provide documentation noting the patient was excluded from the denominator due to liver disease or another medical or patient reason.

Step 4: IFMC will assess and validate the medical records information provided by the PGP on the first 8 of the 30 sampled beneficiaries for each measure, and provide a written report on the results to RTI and the PGP. If no mismatches are found for a given module, the audit process for that module will terminate at this point and Phase 2 will not be conducted.

Phase 2

Step 5: If ≥1 mismatches are found at the measure level in the first 8 records, then the medical records for the remaining 22 beneficiaries in the module's audit sample will be assessed and validated. A written report on the results will be provided to RTI and the PGP.

Step 6: Agreement rates for the entire sample of 30 records will be calculated by IFMC and provided to RTI and each respective PGP.

Step 7: If the mismatch rate is ≤ 10% for the 30 records audited, then the audit process will terminate at this point and Phase 3 will not be conducted. The quality performance levels reported by the PGP will be accepted without modification.

Phase 3

Step 8: If > 10% mismatches are found in the 30 records assessed in Phase 2, then the PGP's calculated quality performance will be revised to reflect the audit assessments of the numerator inclusions and the denominator exclusions.

Step 9: The PGP will review its medical record abstracting procedures with IFMC and revise its data submitted for the given condition module as needed.

Step 10: Another random sample of 30 beneficiaries will then be drawn for that module and the audit process will be repeated, starting with Step 1. If again > 10% mismatches are found then the audit process will be repeated a third time. If, at the conclusion of the third audit process the mismatch rate is still > 10%, then the PGP will not be given credit for meeting the quality target for any measures for which this mismatch rate still exists.

Each PGP's audit and validation results will remain confidential. Only CMS, RTI, and IFMC staff will review the audit data and written assessments.

The audit process will examine the following questions regarding the PGP's submitted data records regarding the sampling and denominator inclusion criteria:

- Was this record appropriately included in the numerator?

  Example: DM-8 (Foot Exam) -- if documentation supporting denominator inclusion criteria are met and documentation indicates that a complete foot exam was provided one or more times in the measurement period, then the record will be included in the numerator and denominator. It is not necessary to ascertain whether any denominator exclusions exist.

- Was this record appropriately excluded from the denominator?

  Example: HF-6 (Beta Blocker Therapy) -- to correctly remove a record from the denominator, documentation must be present to support a history of Class IV (congestive) heart failure or a history of 2nd or 3rd degree (AV) block without a pacemaker or one of the other denominator exclusions listed in the measure specifications.

The medical records audit and validation process will also be applied to the base year data (CY 2004), depending on the number of modules for which PGPs decide to submit baseline medical records data. PGPs will have the option of not submitting baseline data on medical records-based quality measures. In that situation, PGPs would rely on the threshold targets to demonstrate the quality performance needed to earn quality performance payments. However, PGPs do not have to submit baseline data during the first year of the demonstration. Baseline data can be submitted during any performance year measurement cycle for which the PGP wishes to meet a quality improvement target to earn quality performance payments.

4.9 Additional Education and Training Provided to PGPs

During the course of the demonstration, RTI and IFMC will identify topics regarding medical records abstraction or EHR extraction of data that may require additional education, training, or clarification for PGP staff.

Education and training will be provided in written format, with opportunities for discussion through telephone conferences. The telephone conferences will be held at least 90 days prior to the due date for submission of the data for the following measurement period. For example, training efforts might include information regarding audit mismatch trends identified across PGP sites during the prior year's data collection, in order to assist PGPs in reducing the mismatch rate in the next round of data collection.

SECTION 5
WAREHOUSING DATA

5.1 Database Specifications

RTI will maintain a data warehouse that contains information collected on all aspects of the PGP demonstration. Fields for beneficiary identification numbers and PGP code numbers will be used to link all of the files. This will enable analysis of trends and cross-sectional associations to be conducted across PGPs, across other variables of interest, and across time, both during the demonstration and for the subsequent evaluation.

The data warehouse will contain three types of information: 1) Medicare claims data used for financial and quality measure calculations; 2) medical records abstraction data and related data from PGPs' internal clinical or administrative data systems used for quality measure calculations; and 3) results of PGP financial performance, quality performance, and performance payment calculations. Each is discussed in turn below.

Medicare Claims Data

Appendix 4 lists the Medicare claims variables that will be included in the data warehouse. Data on these variables for each PGP assigned beneficiary and each PGP comparison group beneficiary will be stored in the data warehouse for the base year and each performance year. The HICNO variable is the beneficiary identification number that links all of the claims files and links the claims files to the medical records and PGP internal clinical and administrative systems data files.

These files will include the variables used to calculate the claims-based quality measures for the PGPs. Comparison group data on these variables will enable evaluation studies to compare quality performance at the PGPs to quality performance of other FFS providers in their communities.

Medical Records and PGP Internal Clinical and Administrative Systems Data

Appendix 3 lists the variables included in the data warehouse for information collected from PGPs' medical records and internal clinical and administrative data systems. Data on these variables for each PGP assigned beneficiary selected for medical records abstracting will be stored in the data warehouse for the base year and each performance year. However, medical records and internal clinical and administrative systems data will not be available for comparison group beneficiaries, since their FFS providers are not participating in the demonstration.

These files will include the variables use to calculate the medical records-based quality measures for the PGPs. The HICNO variable will link these data to the Medicare claims data for each beneficiary and also enable analysis across PGPs and over time.

PGP Demonstration Performance and Performance Payment Calculations

The data warehouse will also include a record of all of the calculations conducted for determining PGP financial performance, quality performance, and performance payments under the demonstration. These data will include the following information:

- Costs per beneficiary for PGPs and comparison groups for each demonstration year
- Risk adjustment calculations applied to the cost data for each performance year
- Percentage cost increases for PGPs and comparison groups for each performance year
- Calculations involved in determining cost performance payments and maximum quality performance payments for each performance year
- PGP performance on each quality measure for each demonstration year
- PGP performance on audits for medical records-based quality measures for each demonstration year
- Comparison group performance on claims-based quality measures for each demonstration year
- Calculations involved in determining actual quality performance payments for each performance year
- Data on annual earned performance payments, withhold amounts, paid performance payments, and accrued loss carryforwards for each PGP for each performance year
- Calculations involved in determining the final settlement payments at the conclusion of the demonstration for each PGP

5.2 Data Warehouse Storage and Security Requirements

The PGP demonstration data warehouse will be stored on a server within RTI's computer network. All of the data will be stored as SAS files, so that a common database and statistical analysis language will facilitate analysis across the three data types described in Section 5.1, including claims data, medical records and PGP internal clinical and administrative systems data, and performance payment calculation data.

RTI will use file and folder naming conventions to organize the data files in a manner that maximizes the speed and reliability with which the data warehouse files can be identified and retrieved. The naming conventions will build upon internal standards that RTI programmers have established through years of experience with these types of data

RTI will focus on two goals for protecting the security of the PGP demonstration data warehouse information. First, to protect against unauthorized access; second, to protect against irreversible changes to these data.

To address the first concern, access to the data warehouse will be restricted in three different ways. At the broadest level, the data on RTI's servers are protected by RTI's network security, which severely limits access by those outside of the network. At the next level, within

the network, RTI has a system of share and folder permission rights that, for a given share or folder, permit access to it only for those who require such access. Thus, only a very limited number of RTI staff will have access to the folder containing the PGP data warehouse. Finally, at the most specific level – particular data warehouse files – RTI will apply encryption and password protection when appropriate under the Data Use Agreement to be developed between RTI and CMS.

The second concern, protecting against changes to the data, will be first addressed by applying internal standards by which RTI programmers already abide. RTI programmers work according to standards for naming and organizing source code and documentation files, and these standards will provide for audit trails to be maintained for all changes made to the data contained in the PGP data warehouse.

This second concern will also be addressed by preparing a tape back-up of the data warehouse information after each demonstration year to provide a historical record. The tapes will be stored in a secure location.

SECTION 6
TIMETABLES

This section presents four timetables, one for base year quality measure data collection and three more for data collection in each of the three performance years. For the performance years, the timetables include scheduled dates for calculation of the percentage of the maximum quality performance payment earned for each PGP.

Base Year Data Collection

The first timetable, presented below, includes the annual data collection cycle for the base year of the PGP Demonstration, that covered the period January 1, 2004 through December 31, 2004.

December 31, 2004–Final day of the base year.

June 30, 2005–Claims data for the base year are considered substantially complete.

July 31, 2005–National Claims History data files updated through June 30 become available. RTI submits to the CMS data center the first of the two sequential DESY requests required to extract the claims data needed for identifying the assigned beneficiaries for each PGP.

August 31, 2005-PGPs notify RTI for which medical-records based quality measures they will opt to use a 100% sample instead of the standard condition module sample of 615.

August 31, 2005–RTI identifies assigned beneficiaries for each PGP. (This is an estimated date; the exact date will depend on the speed with which the DESY requests are completed by the CMS data center.)

September 7, 2005–RTI draws a random samples of 615 beneficiaries for medical records abstraction for each condition module for each PGP.

September 15, 2005–RTI completes claims-based quality measures calculations and claims data quality checks for each PGP, and transmits results to PGPs.

September 18, 2005–PGPs notify RTI of claims-based quality measures for which they have opted to conduct "topping up" or hybrid analysis to try to increase the number of positive numerator hits.

September 21, 2005–RTI pre-populates medical records data abstraction tool database with selected demographic and claims data on each of the beneficiaries drawn in the random sample for each condition module for each PGP. Data on additional beneficiaries for "topping up" of claims-based measures also pre-populated as needed.

September 22 and 27, 2005—IFMC conducts WebEx training sessions for PGPs on use of the computerized medical records data abstraction tool.

September 22, 2005–RTI transmits medical records abstraction tool database files to IFMC via QNET.

September 29, 2005–IFMC loads medical records abstraction tool database files received from RTI and transmits them to PGPs via QNET.

October 7, 2005–RTI draws random sample of 30 beneficiaries per condition module for each PGP as a medical records audit sample, and transmits their identifiers to IFMC.

October 15, 2005–IFMC notifies PGPs of the specific beneficiaries and quality measures for which hard copy documentation of medical records abstracts are needed for the audit process.

November 15, 2005—PGPs submit hard copy documentation of medical records abstracts needed for the audit process.

December 1, 2005–PGPs return completed medical records abstraction databases to IFMC.

December 7, 2005–IFMC completes data checking, cleaning, and reconciliation for the medical records data, and then transmits the database files for each PGP to RTI.

December 15, 2005–IFMC completes medical records audit and feedback process with PGPs, and transmits any medical records data revisions to RTI. (Date of audit completion will vary depending on the number of condition modules to be audited during the given demonstration year. This timetable also assumes that the audit process is completed after Phase 2 for all modules; additional audit cycles that may be needed if mismatch rates are too high initially may require more time.)

January 1, 2006–RTI completes calculations of the percentage of eligible beneficiaries treated in accordance with each quality measure for each PGP.

February 1, 2006–RTI completes initial analyses of base year quality measures performance data, including comparisons across PGPs and over time, and analyses for demographic and multiple chronic disease beneficiary subgroups.

February 1, 2006–RTI and IFMC complete preparation of quality measure feedback results for PGPs, and transmit them to the PGPs.

February 1, 2006–IFMC completes preparation of education materials based on error trends found in audit results and distributes them to PGPs (if needed).

Performance Year #1 Data Collection

The second timetable, presented below, includes an annual cycle for performance year 1, covering the period April 1, 2005 through March 31, 2006. Steps for both claims-based and medical records-based quality measurement are included.

March 31, 2006–Final day of performance year 1.

September 30, 2006–Claims data for performance year 1 are considered substantially complete.

October 31, 2006–National Claims History data files updated through September 30 become available. RTI submits to the CMS data center the first of the two sequential DESY requests required to extract the claims data needed for identifying the assigned beneficiaries for each PGP.

November 30, 2006-PGPs notify RTI for which medical-records based quality measures they will opt to use a 100% sample instead of the standard condition module sample of 615.

November 30, 2006–RTI identifies assigned beneficiaries for each PGP. (This is an estimated date; the exact date will depend on the speed with which the DESY requests are completed by the CMS data center.)

December 7, 2006–RTI draws a random samples of 615 beneficiaries for medical records abstraction for each condition module for each PGP.

December 15, 2006–RTI completes claims-based quality measures calculations and claims data quality checks for each PGP, and transmits results to PGPs.

December 18, 2006–PGPs notify RTI of claims-based quality measures for which they have opted to conduct "topping up" or hybrid analysis to try to increase the number of positive numerator hits.

December 21, 2006–RTI pre-populates medical records data abstraction tool database with selected demographic and claims data on each of the beneficiaries drawn in the random sample for each condition module for each PGP. Prior-year medical records data also pre-populated if available. Data on additional beneficiaries for "topping up" of claims-based measures also pre-populated as needed.

December 22, 2006–RTI transmits medical records abstraction tool database files to IFMC via QNET.

January 3, 2007–IFMC loads medical records abstraction tool database files received from RTI and transmits them to PGPs via QNET.

January 7, 2007–RTI draws random sample of 30 beneficiaries per condition module for each PGP as a medical records audit sample, and transmits their identifiers to IFMC.

January 15, 2007–IFMC notifies PGPs of the specific beneficiaries and quality measures for which hard copy documentation of medical records abstracts are needed for the audit process.

February 15, 2007—PGPs submit hard copy documentation of medical records abstracts needed for the audit process.

March 1, 2007–PGPs return completed medical records abstraction databases to IFMC.

March 7, 2007–IFMC completes data checking, cleaning, and reconciliation for the medical records data, and then transmits the database files for each PGP to RTI.

March 15, 2007–IFMC completes medical records audit and feedback process with PGPs, and transmits any medical records data revisions to RTI. (Date of audit completion will vary depending on the number of condition modules to be audited during the given demonstration year. This timetable also assumes that the audit process is completed after Phase 2 for all modules; additional audit cycles that may be needed if mismatch rates are too high initially may require more time.)

April 1, 2007–RTI completes calculations of the percent of quality measures with at least one target met for each PGP, and the percentage of the maximum quality performance payment earned for each PGP.

May 1, 2007–RTI completes initial analyses of quality measures data, including comparisons across PGPs and over time, and analyses for demographic and multiple chronic disease beneficiary subgroups.

May 1, 2007–RTI and IFMC complete preparation of quality measure feedback results for PGPs, and transmit them to the PGPs.

May 1, 2007–IFMC completes preparation of education materials based on error trends found in audit results and distributes them to PGPs (if needed).

Performance Year #2 Data Collection

The third timetable, presented below, includes an annual cycle for performance year 2, covering the period April 1, 2006 through March 31, 2007. Steps for both claims-based and medical records-based quality measurement are included.

March 31, 2007–Final day of performance year 2.

September 30, 2007–Claims data for performance year 2 are considered substantially complete.

October 31, 2007–National Claims History data files updated through September 30 become available. RTI submits to the CMS data center the first of the two sequential DESY requests required to extract the claims data needed for identifying the assigned beneficiaries for each PGP.

November 30, 2007-PGPs notify RTI for which medical-records based quality measures they will opt to use a 100% sample instead of the standard condition module sample of 615.

November 30, 2007–RTI identifies assigned beneficiaries for each PGP. (This is an estimated date; the exact date will depend on the speed with which the DESY requests are completed by the CMS data center.)

December 7, 2007–RTI draws a random samples of 615 beneficiaries for medical records abstraction for each condition module for each PGP.

December 15, 2007–RTI completes claims-based quality measures calculations and claims data quality checks for each PGP, and transmits results to PGPs.

December 18, 2007–PGPs notify RTI of claims-based quality measures for which they have opted to conduct "topping up" or hybrid analysis to try to increase the number of positive numerator hits.

December 21, 2007–RTI pre-populates medical records data abstraction tool database with selected demographic and claims data on each of the beneficiaries drawn in the random sample for each condition module for each PGP. Prior-year medical records data also pre-populated if available. Data on additional beneficiaries for "topping up" of claims-based measures also pre-populated as needed.

December 22, 2007–RTI transmits medical records abstraction tool database files to IFMC via QNET.

January 3, 2008–IFMC loads medical records abstraction tool database files received from RTI and transmits them to PGPs via QNET.

January 7, 2008–RTI draws random sample of 30 beneficiaries per condition module for each PGP as a medical records audit sample, and transmits their identifiers to IFMC.

January 15, 2008–IFMC notifies PGPs of the specific beneficiaries and quality measures for which hard copy documentation of medical records abstracts are needed for the audit process.

February 15, 2008—PGPs submit hard copy documentation of medical records abstracts needed for the audit process.

March 1, 2008–PGPs return completed medical records abstraction databases to IFMC.

March 7, 2008–IFMC completes data checking, cleaning, and reconciliation for the medical records data, and then transmits the database files for each PGP to RTI.

March 15, 2008–IFMC completes medical records audit and feedback process with PGPs, and transmits any medical records data revisions to RTI. (Date of audit completion will vary depending on the number of condition modules to be audited during the given

demonstration year. This timetable also assumes that the audit process is completed after Phase 2 for all modules; additional audit cycles that may be needed if mismatch rates are too high initially may require more time.)

April 1, 2008–RTI completes calculations of the percent of quality measures with at least one target met for each PGP, and the percentage of the maximum quality performance payment earned for each PGP.

May 1, 2008–RTI completes initial analyses of quality measures data, including comparisons across PGPs and over time, and analyses for demographic and multiple chronic disease beneficiary subgroups.

May 1, 2008–RTI and IFMC complete preparation of quality measure feedback results for PGPs, and transmit them to the PGPs.

May 1, 2008–IFMC completes preparation of education materials based on error trends found in audit results and distributes them to PGPs (if needed).

Performance Year #3 Data Collection

The fourth timetable, presented below, includes an annual cycle for performance year 3, which covers the period April 1, 2007 through March 31, 2008. Steps for both claims-based and medical records-based quality measurement are included.

March 31, 2008–Final day of performance year 3.

September 30, 2008–Claims data for performance year 3 are considered substantially complete.

October 31, 2008–National Claims History data files updated through September 30 become available. RTI submits to the CMS data center the first of the two sequential DESY requests required to extract the claims data needed for identifying the assigned beneficiaries for each PGP.

November 30, 2008-PGPs notify RTI for which medical-records based quality measures they will opt to use a 100% sample instead of the standard condition module sample of 615.

November 30, 2008–RTI identifies assigned beneficiaries for each PGP. (This is an estimated date; the exact date will depend on the speed with which the DESY requests are completed by the CMS data center.)

December 7, 2008–RTI draws a random samples of 615 beneficiaries for medical records abstraction for each condition module for each PGP.

December 15, 2008–RTI completes claims-based quality measures calculations and claims data quality checks for each PGP, and transmits results to PGPs.

December 18, 2008–PGPs notify RTI of claims-based quality measures for which they have opted to conduct "topping up" or hybrid analysis to try to increase the number of positive numerator hits.

December 21, 2008–RTI pre-populates medical records data abstraction tool database with selected demographic and claims data on each of the beneficiaries drawn in the random sample for each condition module for each PGP. Prior-year medical records data also pre-populated if available. Data on additional beneficiaries for "topping up" of claims-based measures also pre-populated as needed.

December 22, 2008–RTI transmits medical records abstraction tool database files to IFMC via QNET.

January 3, 2009–IFMC loads medical records abstraction tool database files received from RTI and transmits them to PGPs via QNET.

January 7, 2009–RTI draws random sample of 30 beneficiaries per condition module for each PGP as a medical records audit sample, and transmits their identifiers to IFMC.

January 15, 2009–IFMC notifies PGPs of the specific beneficiaries and quality measures for which hard copy documentation of medical records abstracts are needed for the audit process.

February 15, 2009—PGPs submit hard copy documentation of medical records abstracts needed for the audit process.

March 1, 2009–PGPs return completed medical records abstraction databases to IFMC.

March 7, 2009–IFMC completes data checking, cleaning, and reconciliation for the medical records data, and then transmits the database files for each PGP to RTI.

March 15, 2009–IFMC completes medical records audit and feedback process with PGPs, and transmits any medical records data revisions to RTI. (Date of audit completion will vary depending on the number of condition modules to be audited during the given demonstration year. This timetable also assumes that the audit process is completed after Phase 2 for all modules; additional audit cycles that may be needed if mismatch rates are too high initially may require more time.)

April 1, 2009–RTI completes calculations of the percent of quality measures with at least one target met for each PGP, and the percentage of the maximum quality performance payment earned for each PGP.

May 1, 2009–RTI completes initial analyses of quality measures data, including comparisons across PGPs and over time, and analyses for demographic and multiple chronic disease beneficiary subgroups.

May 1, 2009–RTI and IFMC complete preparation of quality measure feedback results for PGPs, and transmit them to the PGPs.

May 1, 2009–IFMC completes preparation of education materials based on error trends found in audit results and distributes them to PGPs (if needed).

APPENDIX 1
PGP DEMONSTRATION QUALITY CONSENSUS AGREEMENT

The following summarizes the consensus agreement on the quality measures to use under the PGP demonstration, the phase in plan, setting performance thresholds and the weight to place on quality in the sharing methodology. We agreed to use the diabetes, congestive heart failure, coronary artery disease, and hypertension modules. In addition, we will use the preventive care vaccine and cancer screening measures.

A total of 32 measures will be phased in under the following time frame.

Year 1: Diabetes including flu and pneumonia vaccines for that identified population;
Year 2: Year 1 measures plus CHF including flu and pneumonia vaccines for that identified population, and CAD;
Year 3: Year 2 measures plus Hypertension and colorectal and breast cancer screening

Claims based measures will have a weighting of 4 and hybrid and chart only measures will have a weighting of 1 in determining the payments for quality. The total annual quality points available are below.

Year 1: 22 points
Year 2: 45 points
Year 3: 53 points

PGPs may earn separate quality based payments if, for each separate measure, they achieve the higher of 75% compliance or the Medicare HEDIS mean for the measure; OR demonstrate 10% reduction in gap between administrative baseline and 100% compliance; OR achieve the 70th percentile Medicare HEDIS level.

In year 1 of the demonstration 30% of the bonus will be contingent on quality performance and 70% on efficiency; year two 40% of the bonus will be contingent on quality performance and 60% on efficiency; and in year three 50% of the bonus will be contingent on quality and 50% on efficiency.

Quality measures will be reported using the same population used for financial reconciliation. Sampling may be used to report the hybrid or chart only measures. Consistent with the Medicare HEDIS data collection methodology, and without any impact on the established weightings, PGPs can elect to perform hybrid data collection for any of the claims-based measures. The baseline year for the quality measures will be calendar year 2004. The applicable Medicare HEDIS levels will be those reported to CMS in the calendar year immediately prior to the respective PGP performance year.

The following table identifies the measures, weights and total quality points by module.

Diabetes Mellitus	Weight	Congestive Heart Failure	Weight	Coronary Artery Disease	Weight	Preventive Care	Weight
DM-1 HbA1c Management	4	HF-1 Left Ventricular Function Assessment	1	CAD-1 Antiplatelet Therapy	1	HTN-1 Blood Pressure Screening	1
DM-2 HbA1c Control	1	HF-2 Left Ventricular Ejection Fraction Testing	4	CAD-2 Drug Therapy for Lowering LDL Cholesterol	1	HTN-2 Blood Pressure Control	1
DM-3 Blood Pressure Management	1	HF-3 Weight Measurement	1	CAD-3 Beta-Blocker Therapy – Prior MI	1	HTN-3 Plan of Care	1
DM-4 Lipid Measurement	4	HF-4 Blood Pressure Screening	1	CAD-4 Blood Pressure	1	PC-5 Breast Cancer Screening	4
DM-5 LDL Cholesterol Level	1	HF-5 Patient Education	1	CAD-5 Lipid Profile	4	PC-6 Colorectal Cancer Screening	1
DM-6 Urine Protein Testing	4	HF-6 Beta-Blocker Therapy	1	CAD-6 LDL Cholesterol Level	1	[redacted]	[redacted]
DM-7 Eye Exam	4	HF-7 Ace Inhibitor Therapy	1	CAD-7 Ace Inhibitor Therapy	1		
DM-8 Foot Exam	1	HF-8 Warfarin Therapy for Patients HF	1	[redacted]	[redacted]	[redacted]	[redacted]
DM-9 Influenza Vaccination	1	HF-9 Influenza Vaccination	1				
DM-10 Pneumonia Vaccination	1	HF-10 Pneumonia Vaccination	1				
Total Points	22	[redacted]	13	[redacted]	10	[redacted]	8

APPENDIX 2
DOQ PROJECT QUALITY MEASURES SPECIFICATIONS

Data Abstraction Definitions
Demographics

DATA ELEMENTS/ VARIABLE NAME	INSTRUCTIONS (DEFINITION,VALID VALUES)	SYNONYMS	EXCLUSIONS
Abstraction Date **[ABSTRACTDATE]**	Instruction: Enter the date (i.e., today's date) the office/clinic record is abstracted in MM/DD/YYYY format.	None	None
First Name **[FIRSTNAME]**	Instruction: Enter the patient's first name.	None	None
Last Name **[LASTNAME]**	Instruction: Enter the patient's last name.	None	None
Gender **[GENDER]**	Instruction: Select the patient's gender. **Male (1):** Select this option if the patient is male. **Female (2):** Select this option if the patient is female. **Unknown (3):** Select this option if the patient's gender is unknown.	• **Male –** symbol for male, he, him, his, M • **Female –** symbol for female, she, her, F **Abbreviations: WDWM** equals well developed white male. **WDBF** equals well developed black female.	None
Birth Date **[DATEOFBIRTH]**	Instruction: Enter the patient's date of birth in MM/DD/YYYY format.	None	None
Medicare ID Number **[PATIDHIC]**	Instruction: Enter the patient's Medicare/HIC number if the patient is a Medicare consumer (Medicare/HIC numbers include both alpha AND numeric characters).	None	None
Clinic Name, Number **[CLINICNUMBER]**	Instruction: Enter the clinic name and number (i.e., PIN).	None	None
Provider Name, Number **[PROVIDERNUMBER]**	Instruction: Enter the physician name and numeric identification code of the most recent provider of care (i.e., UPIN – number includes both alpha AND numeric characters).	None	None
Medical Record Number **[MRNUMBER]**	Enter the patient's medical record number.	None	None
Other ID Number **[PATIDOTHER]**	Instruction: If the patient is NOT a Medicare consumer, enter the patient's social security number or insurance ID number.	None	None

DIABETES MELLITUS (DM) QUALITY OF CARE MEASURES

DM-1: HbA1c management

Description: Percentage of patients with one or more A1c test(s)

Source of Measure: NDQIA (NQF endorsed)

Clinical Recommendations/Rationale:

American Association of Clinical Endocrinologist/American College of Endocrinology (AACE/ACE): Recommend that a glycosylated hemoglobin be performed during an initial assessment and during follow-up assessments, which occur at no longer than three-month intervals.[1]

American Diabetes Association (ADA): Recommends obtaining a glycosylated hemoglobin during an initial assessment and then routinely as part of continuing care. In the absence of well-controlled studies that suggest a definite testing protocol, expert opinion recommends glycosylated hemoglobin be obtained at least twice a year in patients who are meeting treatment goals and who have stable glycemic control and more frequently (quarterly assessment) in patients whose therapy was changed or who are not meeting glycemic goals.[2]

Denominator Statement: All patients with diabetes (see appendix M.1) $\geq$ 18 and $\leq$ 75 years of age

- **Excluded population: Medical reasons**
  - None
- **Excluded population: Patient reasons**
  - None

Numerator Statement: Patients who received one or more A1c test(s) (see appendix N.1) during the measurement period

Selected References:

1. American Association of Clinical Endocrinologists and American College of Endocrinology. The American Association of Clinical Endocrinologists Medical Guidelines for the Management of Diabetes Mellitus: The AACE System of Intensive Diabetes Self-Management – 2002 update. *Endocrine Practice.* Jan/Feb 2002;8(1).
2. American Diabetes Association: Clinical Practice Recommendations 2002 Standards of Medical Care for Patients with Diabetes Mellitus (Position Statement). *Diabetes Care.* 2002;25(suppl 1):33-49.

Note: If included in numerator for DM-1, include in the denominator for DM-2

DM-2: HbA1c management control

Description: Percentage of patients with most recent A1c level > 9.0% (poor control)

Source of Measure: NDQIA (NQF endorsed)

Clinical Recommendations/Rationale:
American Association of Clinical Endocrinologist/American College of Endocrinology (AACE/ACE): Recommend that A1c be universally adopted as the primary method of assessment of glycemic control. On the basis of data from multiple interventional trials, the target for attainment of glycemic control should be A1c values ≤ 6.5%.[1]

American Diabetes Association (ADA): Because different assays can give varying glycated hemoglobin values, the ADA recommends that laboratories only use assay methods that are certified as traceable to the Diabetes Control and Complications Trial A1c reference method. The ADA's goal for glycemic control is A1c < 7%.[2]

Treatment goals:
AACE/ACE: A1c ≤ 6.5%[1]
ADA: A1c ≤ 7%[2]

Denominator Statement: All patients with diabetes (see appendix M.1) ≥ 18 and ≤ 75 years of age who had at least one A1c test (see appendix N.1)

Numerator Statement: Patients with most recent A1c > 9.0%

Selected References:

1. American Association of Clinical Endocrinologists and American College of Endocrinology. The American Association of Clinical Endocrinologists Medical Guidelines for the Management of Diabetes Mellitus: The AACE System of Intensive Diabetes Self-Management – 2002 update. *Endocrine Practice.* Jan/Feb 2002;8(1).
2. American Diabetes Association: Clinical Practice Recommendations 2002. Standards of Medical Care for Patients with Diabetes Mellitus (Position Statement). *Diabetes Care.* 2002;25(suppl 1):33-49.

DM-3: Blood Pressure Management

Description: Percentage of patients with most recent BP < 140/90 mm Hg

Source of Measure: NDQIA (NQF endorsed)

Clinical Recommendation(s)/Rationale:
AACE/ACE: Recommends that a blood pressure determination during the initial evaluation, including orthostatic evaluation, be included in the initial and every interim physical examination.[1]

ADA: Recommends a blood pressure determination during the initial evaluation (with orthostatic measurements when indicated) and comparison to age-related norms. The routine follow-up examinations should include blood pressure measurement. Primary goal for adults: 130/80 mm Hg.[2]

JNC VI: Recommends that to detect evidence of autonomic dysfunction and orthostatic hypertension, blood pressure should be measured in the supine, sitting, and standing positions in all patients with diabetes mellitus; automated ambulatory blood pressure monitoring may be especially helpful.

NKF: Recommends that all individuals should be evaluated during health encounters to determine whether they are at increased risk of having or of developing chronic kidney disease. This evaluation of risk factors should include blood pressure measurement.[3]

JNC VI: Antihypertensive drug therapy should be initiated along with lifestyle modifications, especially weight loss, to reduce arterial blood pressure to below 130/85 mm Hg. For patients with renal insufficiency or proteinuria, further reduction of blood pressure to 120/75 mm Hg is recommended.[4]

Denominator Statement: All patients with diabetes (see appendix M.1) ≥ 18 and ≤ 75years of age

- **Excluded population: Medical Reasons***
  - None
- **Excluded population: Patient reasons***

*Exclusions only applied if most recent blood pressure not recorded

Numerator Statement: Patients with most recent systolic blood pressure measurement < 140 mm Hg *and* a diastolic blood pressure < 90 mm Hg during the measurement period

Selected References:

1. American Association of Clinical Endocrinologists and American College of Endocrinology. The American Association of Clinical Endocrinologists Medical Guidelines for the Management of Diabetes Mellitus. The AACE System of Intensive Diabetes Self-Management-2002 Update. *Endocrine Practice*. Jan/Feb 2002;8(1).
2. American Diabetes Association: Clinical Practice Recommendations 2002. Standards of Medical Care for Patients with Diabetes Mellitus (Position Statement). *Diabetes Care.* 2002; 25 (suppl 1):33-49.
3. National Kidney Foundation. K/DOQI Clinical Practice Guidelines for Chronic Kidney Disease: Evaluation, Classification, and Stratification Available at http://www.kidney.org/professionals/doqi/guidelineindex.cfm. Accessed February 2003.
4. The Sixty Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC VI). NIH Publication No. 98-4080, November 1997.

DM-4: Lipid Measurement

Description: Percentage of patients with at least one low-density lipoprotein (LDL) cholesterol test

Source of Measure: NDQIA (NQF endorsed)

Clinical Recommendation(s)/Rationale: AACE/ACE
Recommend that a fasting lipid profile be obtained during an initial assessment, each follow-up assessment, and annually as part of the cardiac-cerebrovascular-peripheral vascular module.[1,2]

Clinical Recommendation: ADA
Recommends that a fasting lipid profile be obtained as part of an initial assessment. Adult patients with diabetes should be tested annually for lipid disorders with fasting serum cholesterol, triglycerides, LDL cholesterol, and calculated LDL cholesterol measurements. If values fall in lower-risk levels, assessments may be repeated every two years. (Level E Evidence)[3]

Denominator Statement: All patients with diabetes (see appendix M.1) ≥ 18 and ≤ 75years of age

- **Excluded population: Medical reasons***
  - Other reason documented by the practitioner for not obtaining at least one LDL cholesterol test
- **Excluded population: Patient reasons***

*Exclusions only applied if LDL cholesterol test not obtained

Numerator Statement: Patients with at least one LDL cholesterol test during the measurement period (see appendix U.1)

Selected Reference:

1. American Association of Clinical Endocrinologists and American College of Endocrinology. The American Association of Clinical Endocrinologists Medical Guidelines for the Management of Diabetes Mellitus. The AACE System of Intensive Diabetes Self Management – 2002 Update. *Endocrine Practice.* Jan/Feb 2002;8(1).
2. American Association of Clinical Endocrinologists and American College of Endocrinology. The American Association of Clinical Endocrinologists Medical Guidelines for Clinical Practice for the Diagnosis and Treatment of Dyslipidemia and Prevention of Atherogenesis 2002 Amended Version. *Endocrine Practice.* March/April 2000;6(2).
3. American Diabetes Association. Clinical Practice Recommendations 2002 Standards of Medical Care for Patients with Diabetes Mellitus (Position Statement). Diabetes Care 2002;25(suppl 1):58-61.

Note: If included in numerator for DM-4, include in denominator for DM-5

DM-5: LDL Cholesterol Level

Description: Percentage of patients with most recent LDL cholesterol < 130 mg/dl

Source of Measure: NDQIA (NQF endorsed)

Clinical Recommendation(s)/Rationale:
AACE/ACE:
Recommend that a fasting lipid profile be obtained during an initial assessment, each follow-up assessment, and annually as part of the cardiac-cerebrovascular-peripheral vascular module.[1,2]

Clinical Recommendation(s)/Rationale:
ADA:
Recommends that a fasting lipid profile be obtained as part of an initial assessment. Adult patients with diabetes should be tested annually for lipid disorders with fasting serum cholesterol, triglycerides, LDL cholesterol, and calculated LDL cholesterol measurements. If values fall in lower-risk levels, assessments may be repeated every two years. (Level E Evidence)[3]

Denominator Statement: All patients with diabetes (see appendix M.1) $\geq$ 18 and $\leq$ 75 years of age with at least one LDL cholesterol test

Numerator Statement: Patients with most recent LDL cholesterol < 130 mg/dl (see appendix U.1)

Selected References:

1. American Association of Clinical Endocrinologists and American College of Endocrinology. The American Association of Clinical Endocrinologists Medical Guidelines for the Management of Diabetes Mellitus. The AACE System of Intensive Diabetes Self Management – 2002 Update. *Endocrine Practice.* Jan/Feb 2002;8(1).
2. American Association of Clinical Endocrinologists and American College of Endocrinology. The American Association of Clinical Endocrinologists Medical Guidelines for Clinical Practice for the Diagnosis and Treatment of Dyslipidemia and Prevention of Atherogenesis 2002 Amended Version. *Endocrine Practice.* March/April 2000;6(2).
3. American Diabetes Association. Clinical Practice Recommendations 2002 Standards of Medical Care for Patients with Diabetes Mellitus (Position Statement). Diabetes Care 2002;25(suppl 1):58-61.

DM-6: Urine protein testing

Description: Percentage of patients with at least one test for microalbumin during the measurement year, or who had evidence of medical attention for existing nephropathy
(diagnosis of nephropathy or documentation of microalbuminuria or albuminuria)

Source of Measure: NDQIA (NQF endorsed)

Clinical Recommendations/Rationale:
AACE/ACE:
Recommends that the initial assessment should include a urinalysis, test for microalbuminuria and creatinine clearance. The renal complication module should be performed annually and includes a test for microalbuminuria and creatinine clearance.[1]

ADA:
Recommends that a routine urinalysis be performed at diagnosis in patients with type 2 diabetes. If the urinalysis is positive for protein, a quantitative measure is frequently helpful in the development of a treatment plan. If the urinalysis is negative for protein, a test for the presence of microalbumin is necessary.[2]

Microalbuminuria rarely occurs with short duration of type 1 diabetes; therefore, screening in individuals with type 1 diabetes should begin after 5 years' disease duration. However, some evidence suggests that the prepubertal duration of diabetes may be important in the development of microvascular complications; therefore, clinical judgment should be exercised when individualizing these recommendations. Because of the difficulty in precise dating of the onset of type 2 diabetes, such screening should begin at the time of diagnosis. After the initial screening and in the absence of previously demonstrated microalbuminuria, a test for the presence of microalbumin should be performed annually.[2]

National Kidney Foundation (NKF):
Individuals at increased risk, but found not to have chronic kidney disease, should be advised to follow a program of risk factor reduction, if appropriate, and undergo repeat periodic evaluation.[3]

Denominator Statement: All patients with diabetes (see appendix M.1) $\geq$ 18 and $\leq$ 75 years of age

- **Excluded population: Medical reasons***
  - None
- **Excluded population: Patient reasons***

*Exclusions only applied if the patient did not receive test for microalbumin or have evidence of nephropathy

Numerator Statement: Patients who received any test for microalbuminuria or who had evidence of medical attention for existing nephropathy during the measurement period [diagnosis of nephropathy or documentation of microalbuminuria or albuminuria (see appendices P.1 and P.2)]

Selected References:

1. American Association of Clinical Endocrinologists and American College of Endocrinology. The American Association of Clinical Endocrinologists Medical Guidelines for the Management of Diabetes Mellitus: The AACE System of Intensive Diabetes Self-Management – 2002 update. *Endocrine Practice.* Jan/Feb 2002;8(1).
2. American Diabetes Association: Clinical Practice Recommendations 2002. Diabetic Nephropathy (Position Statement). 2002;25(suppl 1):85-89.
3. National Kidney Foundation. K/DOQI Clinical Practice Guidelines for Chronic Kidney Disease: Evaluation, Classification, and Stratification Available at: http://www.kdoqi.org. Accessed: January 2004.

DM-7: Eye exam

Description: Percentage of patients who received a dilated eye exam or seven standard field stereoscopic photos with interpretation by an optometrist or ophthalmologist or imaging validated to match diagnosis from these photos during the reporting year, or during the prior year if patient is at low risk for retinopathy. A patient is considered low risk if the following criterion is met: has no evidence of retinopathy in the prior year

Source of Measure: NDQIA (NQF endorsed)

Clinical Recommendations/Rationale:
AACE/ACE, ADA, and American Academy of Ophthalmology (AAO): Recommend that a dilated eye examination be performed on patients with diabetes during an initial assessment and at least annually thereafter. [1-3]

AACE/ACE: Recommend that the annual eye examination be performed as part of a retinal module. The module includes test of visual acuity (Snellen chart); funduscopic examination and intraocular pressure (IOP) test. The AACE/ACE recommend that diabetic patients should be under the care of an ophthalmologist experienced in the management of diabetic retinopathy. AACE/ACE further believes that a dilated eye exam should only be done by an MD/DO.

ADA: Patients with type 1 diabetes should have an initial dilated and comprehensive eye examination by an ophthalmologist or optometrist within 3-5 years after the onset of diabetes. In general evaluation for diabetic eye disease is not necessary before 10 years of age. However, some evidence suggests that the prepubertal duration of diabetes may be important in the development of microvascular complications; therefore, clinical judgment should be used when applying these recommendations to individual patients. (Level of Evidence: B)

Patients with type 2 diabetes should have an initial dilated and comprehensive eye examination by an ophthalmologist or optometrist shortly after diabetes diagnosis. (Level of Evidence: B)

Subsequent examinations for type 1 and type 2 diabetes should be repeated annually by an ophthalmologist or optometrist who is knowledgeable and experienced in diagnosing the presence of diabetic retinopathy and is aware of its management. Examination will be required more frequently if retinopathy is progressing. This follow-up interval is recommended recognizing that there are limited data addressing this issue. (Level of Eidence: B)

Seven standard field stereoscopic 30^{o} fundus photography is an accepted method for examining diabetic retinopathy.

AAO: Recommends that diabetic patients should be under the care of an ophthalmologist experienced in the management of diabetic retinopathy. Ophthalmologists with specialized knowledge and experience in managing the disease are best able to detect and treat serious disease. Stereoscopic photographs offer an advantage over nonstereoscopic photographs, and the traditional “seven stereo fields” provide the most complete coverage.

AGS: Dilated eye examinations should be performed every two years at a minimum, and more often if there are additional risk factors for diabetic eye disease or evidence of age-related eye disease.

American Optometric Association: Recommends eye examinations to determine level of diabetic retinopathy as follows (individual situations and level of eye disease may suggest more frequent eye examinations):

Patients aged 29 years or younger (generally type 1 diabetes): within 3-5 years after diagnosis of diabetes once a person is age 10 years or older, and annually thereafter

Patients aged 30 years or older (generally type 2 diabetes): at the time of diagnosis, and annually thereafter

Pregnancy in pre-existing diabetes: prior to conception and during the first trimester, with follow-up evaluation during pregnancy based on findings of the first trimester examination and 6-8 weeks post partum.[4]

Denominator Statement: All patients with diabetes (see appendix M.1) ≥ 18 and ≤ 75 years of age

- **Excluded population: Medical reasons***
  - Other reason documented by the practitioner for not performing a dilated eye exam or seven standard field stereoscopic photos
- **Excluded population: Patient reasons***

*Exclusions only applied if the patient did not receive dilated eye exam or seven standard field stereoscopic photos during the measurement period or during the year prior if patient is at low risk

Numerator Statement: Patients who have received a dilated eye exam or seven standard field stereoscopic photos with interpretation by an optometrist or ophthalmologist or imaging validated to match diagnosis from these photos (see appendix Q.1 and Q.2) during the measurement period or during the prior year if patient is at low risk for retinopathy. A patient is considered low risk if the following criterion is met: has no evidence of retinopathy (see appendix R.1) in the prior year

Selected References:

1. American Association of Clinical Endocrinologists and American College of Endocrinology. The American Association of Clinical Endocrinologists Medical Guidelines for the Management of Diabetes Mellitus: The AACE System of Intensive Diabetes Self-Management – 2002 update. *Endocrine Practice.* Jan/Feb 2002;8(1).
2. American Diabetes Association: Clinical Practice Recommendations 2004. Retinopathy in Diabetes (Position Statement). *Diabetes Care.* 2004;27(suppl 1):84-87.
3. American Academy of Ophthalmology Preferred Practice Pattern on Diabetic Retinopathy, 1998 and Hammond CJ, Shackleton J, Flanagan DW et al. Comparison between an ophthalmic optician and ophthalmologist in screening for diabetic retinopathy. *Eye*. 1996; 10:107-112.
4. American Optometric Association. *Clinical Practice Guideline on Care of the Patient with Diabetes Mellitus.* 3rd Revision. St. Louis, Mo: AOA; 2002.

DM-8: Foot exam

Description: Percentage of eligible patients receiving at least one complete foot exam (visual inspection, sensory exam with monofilament, and pulse exam)

Source of Measure: NDQIA (NQF endorsed)

Clinical Recommendations/Rationale:
AACE/ACE and ADA: Recommend that a foot examination (visual inspection, sensory exam, and pulse exam) be performed during an initial assessment. [1, 2]

AACE/ACE: Recommends that a foot examination be a part of every follow-up assessment visit, which should occur quarterly.

ADA: Recommends that all individuals with diabetes should receive an annual foot examination to identify high-risk foot conditions. This examination should include assessment of protective sensation, foot structure and biomechanics, vascular status, and skin integrity.

The ADA recommends that people with one or more high-risk foot conditions should be evaluated more frequently for the development of additional risk factors. People with neuropathy should have a visual inspection of their feet at every contact with a health care professional.[2]

Denominator Statement: All patients with diabetes (see appendix M.1) $\geq$ 18 and $\leq$ 75 years of age

- **Excluded population: Medical reasons***
  - Patients with bilateral foot/leg amputation (see appendix S.1)
  - Other reason documented by the practitioner for not performing a complete foot exam
- **Excluded population: Patient reasons***

*Exclusions only applied if the patient did not receive complete foot exam

Numerator Statement: Patients who have received at least one complete foot exam (visual inspection, sensory exam with monofilament, and pulse exam) during the measurement period

Selected References:

1. American Association of Clinical Endocrinologists and American College of Endocrinology. The American Association of Clinical Endocrinologists Medical Guidelines for the Management of Diabetes Mellitus: The AACE System of Intensive Diabetes Self-Management – 2002 update. *Endocrine Practice.* Jan/Feb 2002;8(1).
2. American Diabetes Association: Clinical Practice Recommendations 2002. Preventive Foot Care in People with Diabetes (Position Statement). 2002;25(suppl 1):56-57.

DM-9: Influenza Vaccination

Description: The percentage of patients ≥ 50 years of age who received an influenza vaccination from September through February of the year prior to the measurement year

Source of Measure: NCQA/CMS (NQF endorsed)

Clinical Recommendation(s)/Rationale: Annual influenza immunization is recommended for all groups who are at increased risk for complications from influenza including persons aged ≥ 50 years.[1,2]
(B Recommendation, Level-1, 11-2 Evidence)[2]

Denominator Statement: All patients aged ≥ 50 years of age

- **Excluded population: Medical Reasons***
  - Egg allergy (see appendix EE.1)
  - Adverse reaction to influenza vaccine (see appendix EE.1)
  - Other reason documented by the practitioner for not receiving an influenza vaccination
- **Excluded population: Patient reasons***

*Exclusions only applied if influenza vaccination not received

Numerator Statement: Patients who received influenza vaccination from September through February of the year prior to the measurement period (see appendices X.1, X.2 and X.3)

Selected References:

1. Centers for Disease Control and Prevention. Prevention and control of influenza. Recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR (serial online). 2002;51(RR-3):1-31. Available at: http://www.cdc.gov/mmwr/PDF/rr/rr5103.pdf. Accessed February 4, 2004.
2. US Preventive Services Task Force. Guide to clinical preventive services. 2nd ed. 1996. Available at: http://www.ahrq.gov/clinic/2ndcps/adultimm.pdf. Accessed February 2004.

DM-10: Pneumonia Vaccination

Description: The percentage of patients ≥ 65 years of age who ever received a pneumococcal vaccination

Source of Measure: NCQA/CMS (NQF endorsed)

Clinical Recommendations/Rationale: Pneumococcal vaccination is recommended for adults who are 65 years of age or older and people 2-64 years of age who have chronic illnesses or other risk factors.[1,2]

Denominator Statement: All patients ≥ 65 years of age

- **Excluded population: Medical Reasons***
  - Previous anaphylactic reaction to the vaccine or any of its components (see appendix Z.1)
  - Other reason documented by the practitioner for not receiving a pneumococcal vaccination
- **Excluded population: Patient reasons***

*Exclusions only applied if the patient has never received a pneumococcal vaccination

Numerator Statement: Patients who have ever received a pneumococcal vaccination (see appendices Y.1 and Y.2)

Selected References:

1. Summary of Recommendations for Adult Immunization. Adapted from the Advisory Committee on Immunization Practices (ACIP) by the Immunization Action Coalition September 2003. Available at: http://www.immunize.org/catg.d/p2011b.htm. Accessed January 2004.
2. MMWR Weekly. October 10, 2003 / 52(40);965-969. Notice to Readers: Recommended Adult Immunization Schedule-United States 2003-2004. Available at: http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5420a6.htm. Accessed January 2004.

Diabetes Mellitus (DM)
Analytic Flowchart

General Inclusion Criteria

All face-to-face office visits with physician, physicians' assistant, or nurse practitioner occurring during the sampling period where at least two visits had a documented diagnosis of diabetes mellitus (see appendix M.1) AND Patient is ≥ 18 and ≤ 75 years of age at the beginning of the sampling period	[DMCONFIRMED] = 1 (see appendix M.1) AND 01/01/04 (Baseline) – [DATEOFBIRTH] ≥ 18 and ≤ 75 OR 04/01/05 (PY1) – [DATEOFBIRTH] ≥ 18 and ≤ 75 OR 04/01/06 (PY2) – [DATEOFBIRTH] ≥ 18 and ≤ 75 OR 04/01/07 (PY3) – [DATEOFBIRTH] ≥ 18 and ≤ 75

DM Clinical Performance Measures

HbA1c Management (DM-1): Percentage of patients with one or more A1c test(s).

Denominator: All patients with diabetes ≥ 18 and ≤ 75 years of age

Denominator Inclusions

All patients (each unique patient identifier equals one case in the denominator) meeting the inclusion criteria (page 1)	Each unique [PATIENTID] = one case in the denominator **AND** Meeting inclusion criteria (page 1)

Denominator Exclusions (Exclusions only applied if the patient did not receive A1c test)

Any visit where – Excluded for patient reasons	[DMHBA1CTESTNO] = 1

NUMERATOR: PATIENTS WHO RECEIVED ONE OR MORE A1C TEST(S) DURING THE MEASUREMENT PERIOD

Numerator Inclusions

Patients who had an A1c performed at any office/clinic visit (see appendix N.1)	[DMHBA1CTEST] = 1 (see appendix N.1)

Note: If included in the numerator for DM-1, include in the denominator for DM-2

HbA1c Control (DM-2): Percentage of patients with most recent A1c level > 9.0% (poor control)

Denominator: All patients with diabetes ≥ 18 and ≤ 75 years of age who had at least one A1c test

Denominator Inclusions

All patients (each unique patient identifier equals one case in the denominator)	Each unique [PATIENTID] = one case in the denominator

Note: If included in the numerator for DM-1, include in the denominator for DM-2

NUMERATOR: PATIENTS WITH MOST RECENT A1C > 9.0%

Numerator Inclusions

Patients with most recent A1c > 9.0%	[DMHBA1CVALUE] > 9.0% for most recent [DMHBAICDATE]

Blood Pressure Management (DM-3): Percentage of patients with most recent BP < 140/90 mm Hg

Denominator: All patients with diabetes ≥ 18 and ≤ 75 years of age

Denominator Inclusions

All patients (each unique patient identifier equals one case in the denominator) meeting the inclusion criteria (page 1)	Each unique [PATIENTID] = one case in the denominator **AND** Meeting inclusion criteria (page 1)

Denominator Exclusions

None	None

Numerator: Patients with most recent systolic blood pressure measurement < 140 mm Hg and diastolic blood pressure < 90 mm Hg during the measurement period

Numerator Inclusions

Patients with last systolic blood pressure measurement < 140 mm Hg *and* diastolic blood pressure < 90 mm Hg	[DMBPMEASURE] =1

Lipid Measurement (DM-4): Percentage of patients with at least one low-density lipoprotein (LDL) cholesterol test

Denominator: All patients with diabetes ≥ 18 and ≤ 75 years of age

All patients (each unique patient identifier equals one case in the denominator) meeting the inclusion criteria (page 1)	Each unique [PATIENTID] = one case in the denominator **AND** Meeting inclusion criteria (page 1)

Denominator Exclusions (Exclusions only applied if LDL cholesterol test not obtained)

Any visit where- Excluded for Medical Reasons: • other reason documented by the practitioner for not obtaining at least one LDL-C test Excluded for Patient Reasons	[PCLDLCTESTNO] = 1 **OR** [PCLDLCTESTNO] = 2

Numerator: Patients with at least one LDL cholesterol test during the measurement period

Numerator Inclusions

Patient who had at least one LDL cholesterol test (see appendix U.1)	[PCLDLCTEST] = 1 (see appendix U.1)

Note: If included in the numerator for DM-4, include in the denominator for DM-5

LDL Cholesterol Level (DM-5): Percentage of patients with most recent LDL cholesterol < 130 mg/dl

Denominator: All patients with diabetes ≥ 18 and ≤ 75 years of age with at least one LDL cholesterol test

Denominator Inclusions

All patients (each unique patient identifier equals one case in the denominator)	Each unique [PATIENTID] = one case in the denominator

Note: If included in the numerator for DM-4, include in the denominator for DM-5

Numerator: Patients with most recent LDL cholesterol < 130 mg/dl

Numerator Inclusions

Patients with most recent LDL cholesterol < 130 mg/dl (see appendix U.1)	[PCLDLCVALUE] < 130 for most recent [PCLDLCDATE] (see appendix U.1)

Urine Protein Testing (DM-6): Percentage of patients with at least one test for microalbumin during the measurement year, or who had evidence of medical attention for existing nephropathy (diagnosis of nephropathy or documentation of microalbuminuria or albuminuria)

Denominator: All patients with diabetes ≥ 18 and ≤ 75 years of age

Denominator Inclusions

All patients (each unique patient identifier equals one case in the denominator) meeting the inclusion criteria (page 1)	Each unique [PATIENTID] = one case in the denominator **AND** Meeting inclusion criteria (page 1)

Denominator Exclusions (Exclusions only applied if the patient did not receive test for microalbumin or have evidence of nephropathy)

Any visit where – Excluded for patient reasons	[DMMICALBTESTNO] = 1

Numerator: Patients who received any test for microalbuminuria or who had evidence of medical attention for existing nephropathy during the measurement period (diagnosis of nephropathy or documentation of microalbuminuria or albuminuria)

Numerator Inclusions

Patients who had any test for microalbumin during the measurement period or who had evidence of nephropathy (see appendices, P.1 and P.2)	[DMMICALBTEST] = 1 (see appendix P.2) **OR** [DMNEPHROPATHY] = 1 (see appendices P.1 and P.2)

Eye Exam (DM-7): Percentage of patients who received a dilated eye exam or seven standard field stereoscopic photographs with interpretation by an optometrist or ophthalmologist or imaging validated to match diagnosis from these photos during the reporting year, or during the prior year if patient is at low risk for retinopathy. A patient is considered low risk if the following criterion is met: has no evidence of retinopathy in the prior year

Denominator: All patients with diabetes ≥ 18 and ≤ 75 years of age

Denominator Inclusions

All patients (each unique patient identifier equals one case in the denominator) meeting the inclusion criteria (page 1)	Each unique [PATIENTID] = one case in the denominator **AND** Meeting inclusion criteria (page 1)

Denominator Exclusions (Exclusions only applied if the patient did not receive dilated eye exam or seven standard field stereoscopic photos during the measurement period or during the year prior if patient is at low risk)

Any visit where- Excluded for Medical Reasons: • other reason documented by the practitioner for not performing a dilated eye exam or seven standard field stereoscopic photos Excluded for Patient Reasons	[DMEYEEXAMNO] = 2 **OR** [DMEYEEXAMNO] = 3

Numerator: Patients who received a dilated eye exam or seven standard field stereoscopic photos with interpretation by an optometrist or ophthalmologist or imaging validated to match diagnosis from these photos during the measurement period, or during the prior year if patient is at low risk for retinopathy. A patient is considered low risk if the following criterion is met: has no evidence of retinopathy in the prior year

Numerator Inclusions

Patients who received a dilated eye exam or seven standard field stereoscopic photos with interpretation by an optometrist or ophthalmologist or imaging validated to match diagnosis from these photos(see appendices Q.1 and Q.2) during the measurement period OR during the prior year if the patient is at low risk for retinopathy (see appendix R.1)	[DMEYEEXAM] = 1 (see appendices Q.1 and Q.2) **OR** [DMEYEEXAMNO] = 1 (codes in appendix R.1 not present)

Foot Exam (DM-8): Percentage of eligible patients receiving at least one complete foot exam (visual inspection, sensory exam with monofilament, and pulse exam)

Denominator: All patients with diabetes ≥ 18 and ≤ 75 years of age

Denominator Inclusions

All patients (each unique patient identifier equals one case in the denominator) meeting the inclusion criteria (page 1)	Each unique [PATIENTID] = one case in the denominator **AND** Meeting inclusion criteria (page 1)

Denominator Exclusions (Exclusions only applied if the patient did not receive complete foot exam)

Any visit where- Excluded for Medical Reasons: • history of bilateral foot/leg amputation • other reason documented by the practitioner for not performing a complete foot exam (see appendix S.1) Excluded for Patient Reasons	[DMFOOTEXAMNO] = 1 (see appendix S.1) **OR** [DMFOOTEXAMNO] = 2

Numerator: Patients who received at least one complete foot exam (visual inspection, sensory exam with monofilament, and pulse exam) during the measurement period

Numerator Inclusions

Patients who received at least one complete foot exam	[DMFOOTEXAM] = 1 in position 1 **AND** [DMFOOTEXAM] = 1 in position 2 **AND** [DMFOOTEXAM] = 1 in position 3

Influenza Vaccination (DM-9): Percentage of patients ≥ 50 years of age who received an influenza vaccination from September through February of the year prior to the measurement year

For the purposes of PGP, the influenza season will be defined as follows: Baseline = 9/03 - 2/04; PY1 = 9/05 - 2/06; PY2 = 9/06 - 2/07; PY3 = 9/07 - 2/08.

Denominator: All patients ≥ 50 years of age

All patients (each unique patient identifier equals one case in the denominator) meeting the inclusion criteria (page one) and ≥ 50 years of age	Each unique [PATIENTID] = one case in the denominator **AND** Meeting inclusion criteria (page one) **AND** 01/01/04 (Baseline) – [DATEOFBIRTH] ≥ 50 04/01/05 (PY1) – [DATEOFBIRTH] ≥ 50 04/01/06 (PY2) – [DATEOFBIRTH] ≥ 50 04/01/07 (PY3) – [DATEOFBIRTH] ≥ 50

Denominator Exclusions (Exclusions only applied if influenza vaccination not received)

Any visit where- Excluded for Medical Reasons: • egg allergy • adverse reaction to influenza vaccine • other reason documented by practitioner for not receiving an influenza vaccination (see appendix EE.1) Excluded for Patient Reasons	[PCFLUSHOTNO] = 1 (see appendix EE.1) **OR** [PCFLUSHOTNO] = 2

Numerator: Patients who received an influenza vaccination from September through February of the year prior to the measurement period

Numerator Inclusions

Patients who received an influenza vaccination from September through February of the year prior to the measurement period (see appendices X.1, X.2 and X.3)	[PCFLUSHOT] = 1 (see appendices X.1, X.2 and X.3)

Pneumonia Vaccination (DM-10): Percentage of patients ≥ 65 years of age who ever received a pneumococcal vaccination

Denominator: All patients ≥ 65 years of age

All patients (each unique patient identifier equals one case in the denominator) meeting the inclusion criteria (page one) and ≥ 65 years of age	Each unique [PATIENTID] = one case in the denominator **AND** Meeting inclusion criteria (page one) **AND** 01/01/04 (Baseline) – [DATEOFBIRTH] ≥ 65 04/01/05 (PY1) – [DATEOFBIRTH] ≥ 65 04/01/06 (PY2) – [DATEOFBIRTH] ≥ 65 04/01/07 (PY3) – [DATEOFBIRTH] ≥ 65

Denominator Exclusions (Exclusions only applied if the patient has never received a pneumococcal vaccination)

Any visit where- Excluded for Medical Reasons: • previous anaphylactic reaction to the vaccine or any of its components • other reason documented by the practitioner for not receiving an pneumococcal vaccination (see appendix Z.1) Excluded for Patient Reasons	[PCPNEUMOSHOTNO] = 1 (see appendix Z.1) **OR** [PCPNEUMOSHOTNO] = 2

Numerator: Patients who have ever received a pneumococcal vaccination

Numerator Inclusions

Patients who ever received a pneumococcal vaccination (see appendices Y.1 and Y.2)	[PCPNEUMOSHOT] = 1 (see appendices Y.1 and Y.2)

Measurement period:
Baseline = 01/01/04 - 12/31/04; PY1 = 04/01/05 - 03/31/06;
PY2 = 04/01/06 - 03/31/07; PY3 = 04/01/07 - 03/31/08

Data Abstraction Definitions (DM)

DATA ELEMENTS/ VARIABLE NAME	INSTRUCTIONS (DEFINITION,VALID VALUES)	SYNONYMS	EXCLUSIONS
Confirm Diagnosis of Diabetes Mellitus (DM) **[DMCONFIRMED]**	Instruction: Determine if the patient has a documented history of DM. **Yes (1):** Select this option if the patient has a documented history of DM anywhere in the office/clinic record. **No (0)** Select this option if the patient has no documented history of DM anywhere in the office/clinic record. **If "No", STOP ABSTRACTION**	Adult onset diabetes mellitus, AODM, adult onset diabetes, AOD, diabetes mellitus, diabetes, Type II diabetes, IDDM, insulin dependent diabetes mellitus, NIDDM, non-insulin dependent diabetes mellitus, Type I diabetes	Gestational diabetes
HbA1c Management **[DMHBA1CTEST]** **[DMHBA1CDATE]** **[DMHBA1CVALUE]** **[DMHBA1CTEST]** **[DMHBA1CTESTNO]**	Instruction: Determine if the patient had one or more A1c tests performed <u>during the measurement period</u>. **Yes (1):** Select this option if the patient had one or more A1c tests. ▪ *Record the most recent date the blood was drawn for the A1c in MM/DD/YYYY format.* ▪ *Record the most recent A1c value* **No (0):** Select this option if the patient did not have one or more A1c tests. ▪ **Not performed for patient reasons (1):** Select this option if the A1c test was not performed for patient reasons. ▪ **Not performed-no reason documented (2):** Select this option if there is no reason documented for not performing an A1c test.	Hemoglobin A1c, Hgb A1c, HB A1c, Ghb, glycol-Hb, glycated Hgb, glycosylated hemoglobin, glycohemoglobin, glycohemoglobin A1c Use the following priority ranking: ▪ Lab report draw date ▪ Lab report date ▪ Flow sheet documentation ▪ Practitioner notes ▪ Other documentation	Hgb, Hemoglobin, Hb, Hg without reference to "glycated" or "A1" or "A1c," fructosamine test

Data Abstraction Definitions (DM)

DATA ELEMENTS/ VARIABLE NAME	INSTRUCTIONS (DEFINITION,VALID VALUES)	SYNONYMS	EXCLUSIONS
Blood Pressure Management **[DMBPMEASURE]**	**Instruction: Determine if the patient's most recent BP was < 140 mm Hg systolic *and* < 90 mm Hg diastolic during the measurement period.** Yes (1): **Select this option if the patient's most recent BP measurement was < 140 mm Hg systolic *and* < 90 mm Hg diastolic.** No (0): **Select this option if the patient's most recent BP measurement was not < 140 mm Hg systolic *and* < 90 mm Hg diastolic.**	*Note: If multiple blood pressure measurements are recorded at a single visit, use the following priority ranking to select one:* ▪ If available, record the lowest diastolic BP measured by a physician. If BP taken by physician in multiple positions, record using priority ranking: 1) sitting, 2) supine, 3) standing. ▪ If BP not measured by a physician, record the lowest diastolic BP measured by a nurse. If BP taken by nurse in multiple positions, record using priority ranking: 1) sitting, 2) supine, 3) standing. ▪ If BP not measured by a physician or nurse, record the lowest diastolic BP measured by any other health care provider. If BP taken in multiple positions by other health care provider, record using priority ranking: 1) sitting, 2) supine, 3) standing.	None

Data Abstraction Definitions (DM)

DATA ELEMENTS/ VARIABLE NAME	INSTRUCTIONS (DEFINITION,VALID VALUES)	SYNONYMS	EXCLUSIONS
Lipid Measurement **[PCLDLCTEST]** **[PCLDLCDATE]** **[PCLDLCVALUE]** **[PCLDLCTEST]** **[PCLDLCTESTNO]**	THIS ELEMENT IS SYNCHRONIZED WITH THE LDL ELEMENT IN CAD Instruction: Determine if the patient had one or more LDL-C tests during the measurement period. **Yes (1):** Select this option if the patient had one or more LDL-C tests. ▪ *Record the most recent date the blood was drawn for LDL Cholesterol in MM/DD/YYYY format.* ▪ *Record the most recent LDL-C value [if laboratory unable to calculate LDL-C value due to high triglycerides, record 0 (zero)]* **No (0):** Select this option if the patient did not have one or more LDL-C tests. ▪ **Not performed for medical reasons (1):** Select this option if the LDL-C test was not performed for medical reasons. ▪ **Not performed for patient reasons (2):** Select this option if the LDL-C test was not performed for patient reasons. ▪ **Not performed-no reason documented (3):** Select this option if there is no reason documented for not performing a LDL-C test.	Cholesterol analysis, cholesterol panel, cholesterol profile, fasting lipids, LDL:HDL, LDL:HDL ratio, lipid analysis, lipid panel, lipid profile, lipids, lipoprotein analysis, low density lipoprotein (LDL), LDL-Cholesterol, LDL-C Use the following priority ranking: ▪ Lab report draw date ▪ Lab report date ▪ Flow sheet documentation ▪ Practitioner notes ▪ Other documentation Medical reasons for not performing an LDL-C test may include: Other reason documented by practitioner for not obtaining at least one LDL-C test	None

DATA ELEMENTS/ VARIABLE NAME	INSTRUCTIONS (DEFINITION,VALID VALUES)	SYNONYMS	EXCLUSIONS
Urine Protein Testing **[DMMICALBTEST]** **[DMMICALBTESTNO]**	Instruction: Determine if at least one test for microalbumin was performed during the measurement period. **Yes (1):** Select this option if at least one test for microalbumin was performed. **No (0):** Select this option if at least one test for microalbumin was not performed. ▪ **Not performed for patient reasons (1):** Select this option if a test for microalbumin was not performed for patient reasons. ▪ **Not performed-no reason documented (2):** Select this option if there is no reason documented for not performing a test for microalbumin.	Microalbuminuria Micral strip, reagentstrip/dipstick for microablumin, 24-hour urine for microalbuminuria, random urine for microalbumin, timed urine for microalbuminuria, spot urine for microalbuminuria, microalbumin/creatinine ratio	Ketones, glucose, diastix, ketodiastix
Urine Protein Testing **[DMNEPHROPATHY]**	Instruction: Determine if the patient had evidence of nephropathy during the measurement period. **Yes (1):** Select this option if the patient had documented evidence of nephropathy. Evidence of nephropathy is defined as any of the following: ▪ evidence of a visit to a nephrologist ▪ diabetic nephropathy ▪ a positive result for microalbuminuria ▪ a positive result for macroalbuminuria ▪ end-stage renal disease (ESRD) ▪ chronic renal failure (CRF) ▪ acute renal failure (ARF) ▪ renal insufficiency ▪ hemodialysis or peritoneal dialysis **No (0):** Select this option if the patient did not have documented evidence of nephropathy.	**Macroalbuminuria** Positive urine dipstick, positive tablet reagent, protein results reported as: trace, 1+, 2+, 3+, 4+, routine urinalysis with protein reported Microalbuminuria Micral strip, reagentstrip/dipstick for microablumin, 24-hour urine for microalbuminuria, random urine for microalbumin, timed urine for microalbuminuria, spot urine for microalbuminuria, microalbumin/creatinine ratio	Microalbuminuria Ketones, glucose, diastix, ketodiastix

Data Abstraction Definitions (DM)

DATA ELEMENTS/ VARIABLE NAME	INSTRUCTIONS (DEFINITION,VALID VALUES)	SYNONYMS	EXCLUSIONS
Eye Exam **[DMEYEEXAM]** **[DMEYEEXAMNO]**	Instruction: Determine if the patient had a dilated eye exam or seven standard field stereoscopic photos by an optometrist or ophthalmologist during the measurement period. **Yes (1):** Select this option if the patient had a dilated eye exam or evaluation of seven standard field stereoscopic photos by an optometrist or ophthalmologist. **No (0):** Select this option if the patient did not have a dilated eye exam or seven standard field stereoscopic photos by an optometrist or ophthalmologist. ▪ **Low risk patient (1):** Select this option if the patient is at low risk for retinopathy *[patient is considered low risk if the following criterion is met: has no evidence of retinopathy (confirmed by a dilated eye exam or evaluation of retinal photographs by an optometrist or ophthalmologist) in the prior year (defined as the 12 months prior to the measurement period –Baseline = 01/01/03-12/31/03; PY1 = 04/01/04-03/31/05; PY2 = 04/01/05-03/31/06; PY3 = 04/01/06-03/31/07;)]*. ▪ **Not performed for medical reasons (2)** Select this option if a dilated eye exam or seven standard field stereoscopic photos by an optometrist or ophthalmologist was not performed for medical reasons. ▪ **Not performed for patient reasons (3):** Select this option if a dilated eye exam or seven standard field stereoscopic photos by an optometrist or ophthalmologist was not performed for patient reasons. ▪ **Not performed-no reason documented (4):** Select this option if there is no reason documented for not performing a dilated eye exam or seven standard field stereoscopic photos by an optometrist or ophthalmologist.	The following terms indicate a dilated eye exam was performed. These terms may be found on documentation from an ophthalmologist screening for and following patients for diabetic retinopathy. A/V (artery to vein ratio), A/V nicking (artery to vein configuration), BDR (background diabetic retinopathy), BRAO (branch retinal artery occlusion), BRVO (branch retinal vein occlusion), C/D (cup to disc ratio), CME (cystoid macular edema), CNV (choroidal neovascularization – new blood vessel growth found in the "wet" form of macular degeneration), coloboma, CRAO (central retinal artery occlusion), crescents and rings, CRVO (central retinal vein occlusion), CW/CWS (cotton wool spots), D/M/P (disc/macula/periphery), DR (diabetic retinopathy), D/V/M (disc/vessels/macula), DFE (dilated fundus exam), disc (optic nerve head), dot and blot hemorrhages, drusen (colloid bodies, white epithelial spots on the retina), FA (fluorescein angiography/angiogram), fovea centralis (an area of slight depression on the retina, at the posterior pole, which marks the point of central vision), fundus (evidence that a retinal exam was done), glaucomatous cupping, hard yellow exudates, healed chorioretinitis, IRMA (intraretinal microvascular abnormality formation), MCFN (macular clean, fundi normal), ME (macular edema), medullated nerve fibers, NPDR (nonproliferative diabetic retinopathy), NVD (neovascularization involving the disc), NVE (neovascularization elsewhere or retinal neovascularization), ON (Optic nerve), optic atrophy, papilledema, PDR (proliferative diabetic retinopathy), Photocoag (lasar photocoagulation), pre-retinal hemorrhage, PVD (posterior vitreous detachment - retinal detachment),	An eye exam that simply states eyes within normal limits (WNL)

DATA ELEMENTS/ VARIABLE NAME	INSTRUCTIONS (DEFINITION,VALID VALUES)	SYNONYMS	EXCLUSIONS
Eye Exam (cont.)		**retinal hemorrhages (superficial or deep), rings and crescents, SLE (slit lamp examination – acceptable only if retinal exam is specified), Tears – rips (retinal tears), vessels (evidence that a retinal exam was done), waxy, cotton wool, or hard yellow exudates, WWOP (with/without pressure – a peripheral retinal change)** Medical reasons for not performing a dilated eye exam or evaluation of retinal photographs may include: **Other reason documented by the practitioner for not performing a dilated eye exam or seven standard field stereoscopic photos**	

Data Abstraction Definitions (DM)

DATA ELEMENTS/ VARIABLE NAME	INSTRUCTIONS (DEFINITION,VALID VALUES)	SYNONYMS	EXCLUSIONS
Foot Exam **[DMFOOTEXAM]**	Instruction: Determine if the patient had any of the following foot exam components performed during the measurement period. *Select all that apply (Note: all foot exam components do not need to be completed during the same visit):* **Visual inspection (1)** **Sensory exam with monofilament (2)** **Pulse exam (3)**	**A complete foot exam includes a visual inspection, a sensory exam with monofilament, and a pulse exam.** **Visual inspection** **May refer to foot lesions, ulcers, deformities, clubbing, cyanosis, edema, toe nail clipping, diabetic foot care (DFC)** **Sensory exam** **Testing with monofilament** **Pulse exam** **May refer to circulation in feet, temperature, pulses, dorsalis pedis, DP, pedal pulse, posterior tibial, PT, ankle/arm ratio**	Documentation of lower extremities without mention of feet (e.g., "extremities, no edema"), range of motion (ROM) exams, patient self-report of foot condition, foot amputation, sensory exam with tuning fork
[DMFOOTEXAMNO]	If one or more of the foot exam components was not performed, select one of the following: ▪ **Not performed for medical reasons (1):** Select this option if a complete foot exam was not performed for medical reasons. ▪ **Not performed for patient reasons (2):** Select this option if a complete foot exam was not performed for patient reasons. ▪ **Not performed-no reason documented (3):** Select this option if there is no reason documented for not performing a complete foot exam.	Medical reasons for not performing a complete foot exam may include: Bilateral foot/leg amputation, other reason documented by the practitioner for not performing a complete foot exam	

Data Abstraction Definitions (DM)

DATA ELEMENTS/ VARIABLE NAME	INSTRUCTIONS (DEFINITION,VALID VALUES)	SYNONYMS	EXCLUSIONS
Influenza Vaccination **[PCFLUSHOT]** **[PCFLUSHOTNO]**	THIS ELEMENT IS SYNCHRONIZED WITH THE INFLUENZA VACCINATION ELEMENT IN HF Instruction: Determine if the patient received an influenza vaccination during the influenza season (September– February). **Yes (1):** Select this option if the patient received an influenza vaccination during the influenza season. **No (0):** Select this option if the patient did not receive an influenza vaccination during the influenza season. ▪ **Not received for medical reasons (1):** Select this option if the patient did not receive an influenza vaccination for medical reasons. ▪ **Not received for patient reasons (2):** Select this option if the patient did not receive an influenza vaccination for patient reasons. ▪ **Not received – no reason documented (3):** Select this option if there is no reason documented for the patient not receiving an influenza vaccination.	Medical reasons for not receiving an influenza immunization may include: Egg allergy, adverse reaction to influenza vaccine, other reason documented by practitioner for not receiving an influenza immunization	None
Pneumonia Vaccination ***[PCPNEUMOSHOT]*** **[PCPNEUMOSHOTNO]**	THIS ELEMENT IS SYNCHRONIZED WITH THE PNEUMONIA VACCINATION ELEMENT IN HF Instruction: Determine if the patient has ever received a pneumonia vaccination. **Yes (1):** Select this option if the patient has ever received a pneumonia vaccination. **No (0):** Select this option if the patient has never received a pneumonia vaccination. ▪ **Not received for medical reasons (1):** Select this option if the patient has never received a pneumonia vaccination for medical reasons. ▪ **Not received for patient reasons (2):** Select this option if the patient has never received a pneumonia vaccination for patient reasons. ▪ **Not received–no reason documented (3):** Select this option if there is no reason documented for the patient not receiving a pneumonia vaccination.	Medical reasons for not receiving pneumococcal vaccination may include: Anaphylactic reaction, other reason documented by practitioner for not receiving pneumococcal vaccination	None

HEART FAILURE (HF) QUALITY OF CARE MEASURES

HF-1: Left Ventricular Function (LVF) Assessment

Description: Percentage of patients with HF, who have quantitative or qualitative results of LVF assessment recorded

Source of Measure: AMA Physician Consortium/ACC/AHA (NQF endorsed)

Clinical Recommendation(s)/Rationale:
In patients with HF, an assessment of left ventricular systolic function with 2-dimensional echocardiography or radionuclide ventriculography is recommended.
(Class 1 Recommendation, Level-C Evidence[1])

In patients with a change in clinical status or clinical event/treatment with significant effect on cardiac function, repeat measurement of ejection fraction is recommended.
(Level-C Evidence[1])

Denominator Statement: All patients with HF (see appendix H.1) ≥ 18 years of age

- **Excluded population: Medical reasons***
  - None
- **Excluded population: Patient reasons***

*Exclusions only applied if the patient did not have quantitative or qualitative results of LVF assessment recorded

Numerator Statement: Patients with quantitative or qualitative results of LVF assessment recorded (see appendix I.1)

Selected Reference:

1. Hunt SA, Baker DW, Chin MH, et al. ACC/AHA Guidelines for the Evaluation and Management of Chronic Heart Failure in the Adult: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines 2001.

HF-2: Left Ventricular Function (LVF) Testing

Description: Left ventricular ejection fraction testing during the current year for patients hospitalized with a principal diagnosis of HF during the current year

Source of Measure: CMS

Clinical Recommendation(s)/Rationale:
In patients with HF, an assessment of left ventricular systolic function with 2-dimensional echocardiography or radionuclide ventriculography is recommended.
(Class 1 Recommendation, Level-C Evidence[1])

In patients with a change in clinical status or clinical event/treatment with significant effect on cardiac function, repeat measurement of ejection fraction is recommended.
(Level-C Evidence[1])

Denominator Statement: All patients with a principal diagnosis of HF (see appendix H.1)
≥ 18 years of age hospitalized during the measurement period (see appendix J.2)

- **Excluded population: Medical reasons***
  - Other reason documented by practitioner for not obtaining LVF testing during the measurement period if patient was hospitalized for HF
- **Excluded population: Patient reasons***

*Exclusions only applied if the patient did not receive LVF testing during the measurement period if patient was hospitalized for HF

Numerator Statement: Patients with LVF testing during the measurement period
(see appendix J.1)

Selected Reference:

1. Hunt SA, Baker DW, Chin MH, et al. ACC/AHA Guidelines for the Evaluation and Management of Chronic Heart Failure in the Adult: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines 2001.

HF-3: Weight Measurement

Description: Percentage of HF patient visits with weight measurement recorded

Source of Measure: AMA Physician Consortium/ACC/AHA

Clinical Recommendation(s)/Rationale:
A thorough physical examination is recommended to identify cardiac and noncardiac disorders that may accelerate the progression of HF. This physical examination may include initial and ongoing assessments of the patient's volume status.
(Class 1 Recommendation Level-C Evidence[1])

Denominator Statement: All visits (see appendix K.1) for patients with HF (see appendix H.1) ≥ 18 years of age

- **Excluded population: Medical reasons***
  - Patient visits in which practitioner was unable to weigh patient
- **Excluded population: Patient reasons***

*Exclusions only applied if the patient weight measurement was not recorded

Numerator Statement: Patient visits with weight measurement recorded

Selected Reference:

1. Hunt SA, Baker DW, Chin MH, et al. ACC/AHA Guidelines for the Evaluation and Management of Chronic Heart Failure in the Adult: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines 2001.

HF-4: Blood Pressure Screening

Description: Percentage of patient visits with blood pressure (BP) measurement recorded

Source of Measure: CMS/AMA Physician Consortium/ACC/AHA

Clinical Recommendation(s)/Rationale:
Obtaining proper blood pressure (BP) measurements at each health care encounter is recommended for hypertension detection. Repeated BP measurements ($\geq$ 2 per patient visit) will determine if initial elevations persist and require prompt attention.[1-3]
(Level 1 Recommendation, Level-A Evidence)[3]

Denominator Statement: All visits (see appendix K.1) for patients with HF (see appendix H.1) ≥ 18 years of age

- **Excluded population: Medical Reasons***
  - None
- **Excluded population: Patient reasons***

*Exclusions only applied if blood pressure was not recorded

Numerator Statement: Patient visits with blood pressure measurement recorded

Selected References:

1. National Heart, Lung, and Blood Institute. National High Blood Pressure Education Program. The Seventh Report of the Joint National Committee on Prevention, Dectection, Evaluation, and Treatment of High Blood Pressure. NIH Publication No. 03-5233. May 2003.
2. Schwartz G, Canzanello V, Woolley A, et al. Hypertension, diagnosis and treatment. Institute for Clinical Systems Improvement (ICSI). 2002;42
3. Chandler JM, Connito D, Demme RA, Et al. Diagnosis and management of hypertension in the primary care setting. Department of Veterans Affairs (US). May 1999.

HF-5: Patient Education

Description: Percentage of patients with HF who were provided with patient education on disease management and health behavior changes during one or more visit(s)

Source of Measure: AMA Physician Consortium/ACC/AHA

Clinical Recommendation(s)/Rationale:

Patient education and close supervision is recommended for patients with HF to reduce the likelihood of noncompliance and lead to the detection of changes in body weight or clinical status early enough for effective treatment to be instituted. Avoidance of patient behaviors that may increase the risk of HF (e.g., smoking, alcohol, and illicit drug use) should also be encouraged. (Class 1 Recommendation Level-C Evidence[1])

The 2005 ACC/AHA Heart Failure Guideline Update will be published in the fall of 2005. Upon publication of the Guideline Update, the relevant 2005 Heart Failure Guideline recommendations will be referenced for this measure.

Denominator Statement: All patients with HF (see appendix H.1) ≥ 18 years of age

- **Excluded population: Medical reasons***
  - None
- **Excluded population: Patient reasons***

*Exclusions only applied if the patient was not provided education

Numerator Statement: Patients provided with patient education at one or more visit(s)

Selected Reference:

1. Hunt SA, Baker DW, Chin MH, et al. ACC/AHA Guidelines for the Evaluation and Management of Chronic Heart Failure in the Adult: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines 2001.

HF-6: Beta-Blocker Therapy

Description: Percentage of patients with HF who also have LVSD who were prescribed beta-blocker therapy

Source of Measure: AMA Physician Consortium/ACC/AHA

Clinical Recommendation(s)/Rationale:
Patients with asymptomatic LVSD (Stage B):

- Beta-blocker therapy is recommended for all HF patients with recent myocardial infarction (Level-A Evidence[1]) and patients with reduced ejection fraction.

(Level-B Evidence[1])

Patients with symptomatic LVSD (Stage C[1]):

- Beta-adrenergic blockade in all stable patients unless contraindicated.

(Class 1 Recommendation, Level-A Evidence[1])

Denominator Statement: All HF patients (see appendix H.1) ≥ 18 years of age with LVEF < 40% or with moderately or severely depressed left ventricular systolic function (see appendix I.1)

- **Excluded population: Medical reasons***
  - Documentation of bradycardia < 50 bpm (without beta-blocker therapy) on two consecutive readings, history of Class IV (congestive) heart failure, history of second or third-degree atrioventricular (AV) block without permanent pacemaker (see appendix E.1)
  - Other reason documented by practitioner for not prescribing beta-blocker therapy
- **Excluded population: Patient reasons***

*Exclusions only applied if the patient did not receive beta-blocker therapy

Numerator Statement: Patients who were prescribed beta-blocker therapy (see table 3)

Selected Reference:

1. Hunt SA, Baker DW, Chin MH, et al. ACC/AHA Guidelines for the Evaluation and Management of Chronic Heart Failure in the Adult: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines 2001.

HF-7: ACE Inhibitor or ARB Therapy

Description: Percentage of patients with HF who also have LVSD who were prescribed ACE inhibitor or ARB therapy

Source of Measure: AMA Physician Consortium/ACC/AHA (NQF endorsed)

Clinical Recommendation(s)/Rationale:

Patients with asymptomatic LVSD (Stage B):

- ACE inhibitor therapy is recommended for HF patients with recent myocardial infarction (Level-A Evidence[1]) and in patients with reduced ejection fraction. (Level-B Evidence[1])

Patients with symptomatic LVSD (Stage C):

- ACE inhibitor therapy in all patients, unless contraindicated.

(Class 1 Recommendation, Level-A Evidence[1])

The 2005 ACC/AHA Heart Failure Guideline Update will be published in the fall of 2005. Upon publication of the Guideline Update, the relevant 2005 Heart Failure Guideline recommendations will be referenced for this measure.

Denominator Statement: All HF patients (see appendix H.1) ≥ 18 years of age with LVSD defined as LVEF < 40% or with moderately or severely depressed left ventricular systolic function (see appendix I.1)

- **Excluded population: Medical reasons***
  - Allergy/intolerance to ACE Inhibitor and to ARB therapy
  - ACE inhibitor and ARB contraindications including angioedema, anuric renal failure, moderate or severe aortic stenosis, pregnancy (see appendix G.1)
  - Other reason documented by practitioner for not prescribing ACE inhibitor and ARB therapy
- **Excluded population: Patient reasons***

*Exclusions only applied if the patient did not receive ACE inhibitor or ARB therapy

Numerator Statement: Patients who were prescribed ACE inhibitor or ARB therapy (see tables 4 and 5)

Selected Reference:

1. Hunt SA, Baker DW, Chin MH, et al. ACC/AHA Guidelines for the Evaluation and Management of Chronic Heart Failure in the Adult: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines 2001.

HF-8: Warfarin Therapy for Patients with Atrial Fibrillation

Description: Percentage of patients with HF who also have paroxysmal or chronic atrial fibrillation who were prescribed warfarin therapy

Source of Measure: AMA Physician Consortium/ACC/AHA

Clinical Recommendation(s)/Rationale:
Anticoagulant use is recommended for patients with HF and concomitant diseases (e.g., paroxysmal or chronic atrial fibrillation or previous thromboembolic event. (Class 1 Recommendation, Level-A Evidence[1])

Denominator Statement: All HF patients (see appendix H.1) ≥ 18 years of age with paroxysmal or chronic atrial fibrillation (see appendix L.1)

- **Excluded population: Medical reasons***
  - Allergy/intolerance
  - Risk of bleeding or bleeding disorder (see appendix T.1)
  - Patient noncompliance
  - Other reason documented by practitioner for not prescribing warfarin therapy
- **Excluded population: Patient reasons***

*Exclusions only applied if the patient did not receive warfarin therapy

Numerator Statement: Patients who were prescribed warfarin therapy (see table 8)

Selected Reference:

1. Hunt SA, Baker DW, Chin MH, et al. ACC/AHA Guidelines for the Evaluation and Management of Chronic Heart Failure in the Adult: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines 2001.

HF-9: Influenza Vaccination

Description: The percentage of patients ≥ 50 years of age who received an influenza vaccination from September through February of the year prior to the measurement year

Source of Measure: NCQA/CMS (NQF endorsed)

Clinical Recommendation(s)/Rationale: Annual influenza immunization is recommended for all groups who are at increased risk for complications from influenza including persons aged ≥ 50 years.[1,2]
(B Recommendation, Level-1, 11-2 Evidence)[2]

Denominator Statement: All patients aged ≥ 50 years of age

- **Excluded population: Medical reasons***
  - Egg allergy (see appendix EE.1)
  - Adverse reaction to influenza vaccine (see appendix EE.1)
  - Other reason documented by the practitioner for not receiving an influenza vaccination
- **Excluded population: Patient reasons***

*Exclusions only applied if influenza vaccination not received

Numerator Statement: Patients who received influenza vaccination from September through February of the year prior to the measurement period (see appendices X.1, X.2 and X.3)

Selected References:

1. Centers for Disease Control and Prevention. Prevention and control of influenza. Recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR (serial online). 2002;51(RR-3):1-31. Available at: http://www.cdc.gov/mmwr/PDF/rr/rr5103.pdf. Accessed February 4, 2004.
2. US Preventive Services Task Force. Guide to clinical preventive services. 2nd ed. 1996. Available at: http://www.ahrq.gov/clinic/2ndcps/adultimm.pdf. Accessed February 2004.

HF-10: Pneumonia Vaccination

Description: The percentage of patients ≥ 65 years of age who ever received a pneumococcal vaccination

Source of Measure: NCQA/CMS (NQF endorsed)

Clinical Recommendations/Rationale: Pneumococcal vaccination is recommended for adults who are 65 years of age or older and people 2-64 years of age who have chronic illnesses or other risk factors.[1,2]

Denominator Statement: All patients ≥ 65 years of age

- **Excluded population: Medical Reasons***
  - Previous anaphylactic reaction to the vaccine or any of its components (see appendix Z.1)
  - Other reason documented by the practitioner for not receiving a pneumococcal vaccination
- **Excluded population: Patient reasons***

*Exclusions only applied if the patient has never received a pneumococcal vaccination

Numerator Statement: Patients who have ever received a pneumococcal vaccination (see appendices Y.1 and Y.2)

Selected References:

1. Summary of Recommendations for Adult Immunization. Adapted from the Advisory Committee on Immunization Practices (ACIP) by the Immunization Action Coalition September 2003. Available at: http://www.immunize.org/catg.d/p2011b.htm. Accessed January 2004.
2. MMWR Weekly. October 10, 2003 / 52(40);965-969. Notice to Readers: Recommended Adult Immunization Schedule-United States 2003-2004. Available at: http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5420a6.htm. Accessed January 2004.

Heart Failure (HF)
Analytic Flowchart

General Inclusion Criteria

All face-to-face office visits with physician, physicians' assistant, or nurse practitioner occurring during the sampling period where at least two visits had a documented diagnosis of heart failure (see appendix H.1) **AND** Patient is 18 years or older at the beginning of the sampling period	[HFCONFIRMED] = 1 (see appendix H.1) **AND** 01/01/04 (Baseline) – [DATEOFBIRTH] ≥ 18 **OR** 04/01/05 (PY1) – [DATEOFBIRTH] ≥ 18 **OR** 04/01/06 (PY2) – [DATEOFBIRTH] ≥ 18 **OR** 04/01/07 (PY3) – [DATEOFBIRTH] ≥ 18

HF Clinical Performance Measures

Left Ventricular Function (LVF) Assessment (HF-1): Percentage of patients with HF, who have quantitative or qualitative results of LVF assessment recorded

Denominator: All patients with HF ≥ 18 years of age

Denominator Inclusions

All patients (each unique patient identifier equals one case in the denominator) meeting the inclusion criteria (page 1)	Each unique [PATIENTID] = one case in the denominator **AND** Meeting inclusion criteria (page 1)

Denominator Exclusions (Exclusions only applied if the patient did not have quantitative or qualitative results of LVF assessment recorded)

Any visit where – Excluded for Patient Reasons	[HFLVFASSESSNO] = 1

NUMERATOR: PATIENTS WITH QUANTITATIVE OR QUALITATIVE RESULTS OF LVF ASSESSMENT RECORDED

Numerator Inclusions

Patients who have quantitative or qualitative results of LVF assessment recorded at any office/clinic visit (see appendix I.1)	[HFLVFASSESS] = 1 (see appendix I.1) **AND** [HFLVFRESULT] = 1

Left Ventricular Function (LVF) Testing (HF-2): Percentage of patients with LVF testing during the current year for patients hospitalized with a principal diagnosis of HF during the current year

Denominator: All patients with a principal diagnosis of HF ≥ 18 years of age hospitalized during the measurement period

Denominator Inclusions

All patients (each unique patient identifier equals one case in the denominator) meeting the inclusion criteria (page 1) and who were hospitalized during the measurement period for HF (see appendix J.2)	Each unique [PATIENTID] = one case in the denominator **AND** Meeting inclusion criteria (page 1) **AND** [HFHOSPITAL] =1 (see appendix J.2)

Denominator Exclusions (Exclusions only applied if the patient did not receive LVF testing during the measurement period if patient was hospitalized for HF)

Any visit where- Excluded for Medical Reasons: • other reason documented by the practitioner for not obtaining LVF testing during the measurement period Excluded for Patient Reasons	[HFLVFYEARNO] = 1 **OR** [HFLVFYEARNO] = 2

NUMERATOR: PATIENTS WITH LVF TESTING DURING THE MEASUREMENT PERIOD

Numerator Inclusions

Patients who had LVF testing during the measurement period (see appendix J.1)	[HFLVFASSESS] = 1 (see appendix J.1) **AND** [HFLVFYEAR] = 1

Weight Measurement (HF-3): Percentage of HF patient visits with weight measurement recorded

Denominator: All visits for patients with HF ≥ 18 years of age

Denominator Inclusions

All visits (see appendix K.1) meeting the inclusion criteria (page 1)	Each [PCVISITDATE] = one case in the denominator (see appendix K.1) **AND** Meeting inclusion criteria (page 1)

Denominator Exclusions (Exclusions only applied if the patient weight measurement was not recorded)

Each HF visit where- Excluded for Medical Reasons: • unable to weigh patient Excluded for Patient Reasons	Each [PCVISITDATE] **WITH** [HFWEIGHTNO] = 1 **OR** [HFWEIGHTNO] = 2

Numerator: Patient visits with weight measurement recorded

Numerator Inclusions

Patient visits with a weight measurement recorded	Each [PCVISITDATE] **WITH** [HFWEIGHT] = 1

Blood Pressure Screening (HF-4): Percentage of patient visits with blood pressure (BP) measurement recorded

Denominator: All visits for patients with HF ≥ 18 years of age

Denominator Inclusions

All visits (see appendix K.1) meeting the inclusion criteria (page 1)	Each [PCVISITDATE] = one case in the denominator (see appendix K.1) **AND** Meeting inclusion criteria (page 1)

Denominator Exclusions (Exclusions only applied if BP was not recorded)

Each HF visit where – Excluded for patient reasons	Each [PCVISITDATE] **WITH** [PCBPMEASURENO] = 1

NUMERATOR: PATIENT VISITS WITH BLOOD PRESSURE MEASUREMENT RECORDED

Numerator Inclusions

Patient visits with blood pressure measurement recorded	Each [PCVISITDATE] **WITH** [PCBPMEASURE] = 1

Patient Education (HF-5): Percentage of patients with HF who were provided with patient education on disease management and health behavior changes during one or more visit(s)

Denominator: All patients with HF ≥ 18 years of age

Denominator Inclusions

All patients (each unique patient identifier equals one case in the denominator) meeting the inclusion criteria (page 1)	Each unique [PATIENTID] = one case in the denominator **AND** Meeting inclusion criteria (page 1)

Denominator Exclusions (Exclusions only applied if the patient was not provided education)

Excluded for Patient Reasons	[HFPTEDUCATION] = 2

Numerator: Patients provided with patient education at one or more visit(s)

Numerator Inclusions

Patients provided with patient education at one or more visit(s)	[HFPTEDUCATION] = 1

Beta-Blocker Therapy (HF-6): Percentage of patients with HF who also have LVSD who were prescribed beta-blocker therapy

Denominator: All HF patients ≥ 18 years of age with LVEF < 40% or with moderately or severely depressed left ventricular systolic function

Denominator Inclusions

All patients (each unique patient identifier equals one case in the denominator) meeting the inclusion criteria (page 1) and who also have LVSD (defined as ejection fraction < 40% or qualitative description of moderately or severely depressed left ventricular systolic function) (see appendix I.1)	Each unique [PATIENTID] = one case in the denominator **AND** Meeting inclusion criteria (page 1) **AND** [HFLVSD] = 1 (see appendix I.1)

Denominator Exclusions (Exclusions only applied if the patient did not receive beta-blocker therapy)

Any visit where- Excluded for Medical Reasons: • documentation of bradycardia < 50 bpm (without beta-blocker therapy) on two consecutive readings • history of Class IV (congestive) heart failure • history of 2nd or 3rd degree atrioventricular (AV) block without permanent pacemaker • other reason documented by practitioner for not prescribing beta-blocker therapy (see appendix E.1) Excluded for Patient Reasons	[HFBBLOCKDRUGNO] = 1 (see appendix E.1) **OR** [HFBBLOCKDRUGNO] = 2

Numerator: Patients who were prescribed beta-blocker therapy

Numerator Inclusions

Patients who were prescribed beta-blocker therapy during any clinic/office visit (see table 3)	[HFBBLOCKDRUG] = 1 (see table 3)

ACE Inhibitor or ARB Therapy (HF-7): Percentage of patients with HF who also have LVSD who were prescribed ACE inhibitor or ARB therapy

Denominator: All HF patients ≥ 18 years of age with LVSD defined as LVEF < 40% or with moderately or severely depressed left ventricular systolic function

Denominator Inclusions

All patients (each unique patient identifier equals one case in the denominator) meeting the inclusion criteria (page 1) and who also have LVSD (defined as ejection fraction < 40% or qualitative description of moderately or severely depressed left ventricular systolic function) (see appendix I.1)	Each unique [PATIENTID] = one case in the denominator **AND** Meeting inclusion criteria (page 1) **AND** [HFLVSD] = 1 (see appendix I.1)

Denominator Exclusions (Exclusions only applied if the patient did not receive ACE inhibitor or ARB therapy)

Any visit where- Excluded for Medical Reasons: • allergy or intolerance to ACE inhibitor and ARB therapy • ACE inhibitor and ARB contraindications including angioedema, anuric renal failure, moderate or severe aortic stenosis, pregnancy • other reason documented by practitioner for not prescribing ACE inhibitor and for not prescribing ARB therapy (see appendix G.1) Excluded for Patient Reasons	[HFACEIDRUGNO] = 1 (see appendix G.1) **OR** [HFACEIDRUGNO] = 2

Numerator: Patients who were prescribed ACE inhibitor or ARB therapy

Numerator Inclusions

Patients who were prescribed ACE inhibitor or ARB therapy during any office/clinic visit (see tables 4 and 5)	[HFACEIDRUG] = 1 (see tables 4 and 5)

Warfarin Therapy for Patients with Atrial Fibrillation (HF-8): Percentage of patients with HF who also have paroxysmal or chronic atrial fibrillation who were prescribed warfarin therapy

Denominator: All HF patients ≥ 18 years of age with paroxysmal or chronic atrial fibrillation

Denominator Inclusions

All patients (each unique patient identifier equals one case in the denominator) meeting the inclusion criteria (page 1) and who also have paroxysmal or chronic atrial fibrillation (see appendix L.1)	Each unique [PATIENTID] = one case in the denominator **AND** Meeting inclusion criteria (page 1) **AND** [HFAFIB] = 1 (see appendix L.1)

Denominator Exclusions (Exclusions only applied if the patient did not receive warfarin therapy)

Any visit where- Excluded for Medical Reasons: • allergy/intolerance to warfarin • risk of bleeding or bleeding disorder • patient noncompliance • other reason documented by practitioner for not prescribing warfarin therapy (see appendix T.1) Excluded for Patient Reasons	[HFWARFDRUGNO] = 1 (see appendix T.1) **OR** [HFWARFDRUGNO] = 2

Numerator: Patients who were prescribed warfarin therapy

Numerator Inclusions

Patients who were prescribed warfarin therapy during any office/clinic visit (see table 8)	[HFWARFDRUG] = 1 (see table 8)

Influenza Vaccination (HF-9): Percentage of HF patients ≥ 50 years of age who received an influenza vaccination from September through February of the year prior to the measurement year

For the purposes of PGP, the influenza season will be defined as follows: Baseline = 9/03 - 2/04; PY1 = 9/05 - 2/06; PY2 = 9/06 - 2/07; PY3 = 9/07 - 2/08.

Denominator: All patients ≥ 50 years of age

All patients (each unique patient identifier equals one case in the denominator) meeting the inclusion criteria (page one) and ≥ 50 years of age	Each unique [PATIENTID] = one case in the denominator **AND** Meeting inclusion criteria (page one) **AND** 01/01/04 (Baseline) – [DATEOFBIRTH] ≥ 50 04/01/05 (PY1) – [DATEOFBIRTH] ≥ 50 04/01/06 (PY2) – [DATEOFBIRTH] ≥ 50 04/01/07 (PY3) – [DATEOFBIRTH] ≥ 50

Denominator Exclusions (Exclusions only applied if influenza vaccination not received)

Any visit where- Excluded for Medical Reasons: • egg allergy • adverse reaction to influenza vaccine • other reason documented by practitioner for not receiving an influenza vaccination (see appendix EE.1) Excluded for Patient Reasons	[PCFLUSHOTNO] = 1 (see appendix EE.1) **OR** [PCFLUSHOTNO] = 2

Numerator: Patients who received an influenza vaccination from September through February of the year prior to the measurement period

Numerator Inclusions

Patients who received an influenza vaccination from September through February of the year prior to the measurement period (see appendices X.1, X.2 and X.3)	[PCFLUSHOT] = 1 (see appendices X.1, X.2 and X.3)

Pneumonia Vaccination (HF-10): Percentage of HF patients ≥ 65 years of age who ever received a pneumococcal vaccination

Denominator: All patients ≥ 65 years of age

All patients (each unique patient identifier equals one case in the denominator) meeting the inclusion criteria (page one) and ≥ 65 years of age	Each unique [PATIENTID] = one case in the denominator **AND** Meeting inclusion criteria (page one) **AND** 01/01/04 (Baseline) – [DATEOFBIRTH] ≥ 65 04/01/05 (PY1) – [DATEOFBIRTH] ≥ 65 04/01/06 (PY2) – [DATEOFBIRTH] ≥ 65 04/01/07 (PY3) – [DATEOFBIRTH] ≥ 65

Denominator Exclusions (Exclusions only applied if the patient has never received a pneumococcal vaccination)

Any visit where- Excluded for Medical Reasons: • previous anaphylactic reaction to the vaccine or any of its components • other reason documented by the practitioner for not receiving an pneumococcal vaccination (see appendix Z.1) Excluded for Patient Reasons	[PCPNEUMOSHOTNO] = 1 (see appendix Z.1) **OR** [PCPNEUMOSHOTNO] = 2

Numerator: Patients who have ever received a pneumococcal vaccination

Numerator Inclusions

Patients who ever received a pneumococcal vaccination (see appendices Y.1 and Y.2)	[PCPNEUMOSHOT] = 1 (see appendices Y.1 and Y.2)

Measurement period:
Baseline = 01/01/04 - 12/31/04; PY1 = 04/01/05 - 03/31/06;
PY2 = 04/01/06 - 03/31/07; PY3 = 04/01/07 - 03/31/08

Data Abstraction Definitions (HF)

DATA ELEMENTS/ VARIABLE NAME	INSTRUCTIONS (DEFINITION, VALID VALUES)	SYNONYMS	EXCLUSIONS
Confirm Diagnosis of Heart Failure (HF) **[HFCONFIRMED]**	Instruction: Determine if the patient has a documented history of HF. **Yes (1):** Select this option if the patient has a documented history of HF anywhere in the office/clinic record. **No (0):** Select this option if the patient has no documented history of HF anywhere in the office/clinic record. (see appendix H.1) **If "No" - STOP ABSTRACTION**	Congestive heart failure, CHF, left ventricular failure, biventricular failure, cardiac failure, pump failure, cardiac decompensation, Kerly B lines, pulmonary vascular congestion, ischemic cardiomyopathy, venous congestion, dilated cardiomyopathy, pulmonary edema, lung edema, interstitial edema, perihilar edema/fluid, fluid or volume overload, perihilar congestion interstitial congestion, pulmonary vascular engorgement or cephalization or alveolar edema, left-sided heart failure, right-sided heart failure, systolic heart failure, diastolic heart failure	Pleural effusions, pleural fluid, cardiomegaly, enlarged heart, cardiomyopathy, hypertrophic cardiomyopathy, nonrestrictive cardiomyopathy, enlarged vessels or fullness of pulmonary vasculature Submit question to QMHAG about excluding heart transplant patients
Left Ventricular Function Assessment **[HFLVFASSESS]** **[HFLVFYEAR]** **[HFLVFYEARNO]** **[HFLVFASSESS]** **[HFLVFASSESSNO]**	Instruction: Determine if a LVF assessment was performed <u>any time</u>. **Yes (1):** Select this option if a LVF assessment was performed. ▪ **LVF assessment <u>performed during the measurement period</u> (1):** Select this option if the LVF assessment was performed during the measurement period. ▪ **LVF assessment was <u>not performed during the measurement period</u> (2):** Select this option if the LVF assessment was not performed during the measurement period. o **Not performed for medical reasons (1):** Select this option if a LVF assessment was not performed during the measurement period for medical reasons. o **Not performed for patient reasons (2):** Select this option if a LVF assessment was not performed during the measurement period for patient reasons o **Not performed–no reason documented (3):** Select this option if there is no documentation of a reason a LVF assessment was not performed during the measurement period. **No (0):** Select this option if a LVF assessment was not performed. ▪ **Not performed for patient reasons (1):** Select this option if a LVF assessment was not performed for patient reasons ▪ **Not performed – no reason documented (2):** Select this option if there is no documentation of a reason a LVF assessment was not performed.	LVF assessment may be determined by one of the following diagnostic studies: **Echocardiogram (echo)** ▪ 2-D ▪ cardiac ultrasound ▪ Doppler color flow mapping ▪ M-mode echo ▪ transesophageal echocardiogram (TEE) **Nuclear medicine tests** ▪ adenosine myocardial perfusion stress test with mention of LVF ▪ cardiac blood pool imaging ▪ Cardiolite scan with mention of LVF ▪ gated blood pool imaging study ▪ gated heart study ▪ gated ventriculogram ▪ multiple gated acquisition scan (MUGA) ▪ radionuclide ventriculography ▪ Sestamibi scan with mention of LVF ▪ technetium scan with mention of LVF ▪ thallium stress test with mention of LVF ▪ wall motion study	None

DATA ELEMENTS/ VARIABLE NAME	INSTRUCTIONS (DEFINITION, VALID VALUES)	SYNONYMS	EXCLUSIONS
Left Ventricular Function Assessment (cont.)		**Cardiac catheterization (cath) with left ventriculogram (LV gram)** ▪ cardiac catheterization (cath) with mention of LVF ▪ cardiac/coronary angiogram with left ventriculogram (LV gram) ▪ cardiac/coronary angiogram with mention of LVF ▪ cardiac/coronary arteriogram with left ventriculogram (LV gram) ▪ cardiac/coronary arteriogram with mention of LVF ▪ left ventriculogram Medical reasons for not obtaining LVF assessment during the measurement period may include: Other reason documented by practitioner for not obtaining LVF testing during the measurement period	
Left Ventricular Function Assessment Result **[HFLVFRESULT]**	Instruction: Determine if the result of the LVF assessment was *documented* in the office/clinic record <u>any time</u> (quantitative or qualitative). **Yes (1):** Select this option if the result of the LVF assessment is documented in the office/clinic record (quantitative or qualitative). **No (0):** Select this option if the result of the LVF assessment is not documented in the office/clinic record (quantitative or qualitative).	***Synonyms for LVF description may include:*** **Left ventricular function (LVF)** ▪ akinesis ▪ contractility ▪ diastolic dysfunction ▪ diastolic function ▪ diastolic impairment ▪ dyskinesis ▪ ejection fraction (EF) ▪ hypokinesis ▪ left ventricular diastolic dysfunction ▪ left ventricular diastolic function ▪ left ventricular dysfunction (LVD) ▪ left ventricular ejection fraction (LVEF) ▪ left ventricular systolic dysfunction (LVSD) ▪ systolic dysfunction ▪ systolic function	**Left ventricular function (LVF)** ▪ left ventricular compliance ▪ left ventricular dilatation ▪ left ventricular dilation ▪ left ventricular function, or any of the other terms in the **LVF Assessment Inclusion Table**, described using one of the following qualifiers: cannot exclude, cannot rule out, may have, may have had, may indicate, possible, suggestive of, suspect, or suspicious ▪ left ventricular hypertrophy (LVH)

Data Abstraction Definitions (HF)

DATA ELEMENTS/ VARIABLE NAME	INSTRUCTIONS (DEFINITION, VALID VALUES)	SYNONYMS	EXCLUSIONS
Left Ventricular Systolic Dysfunction (LVSD) **[HFLVSD]**	Instructions: Determine if the patient has LVSD (use most recent result). LVSD is present when left ventricular ejection fraction (LVEF) is less than 40% or documented as moderate to severe. **Yes (1):** Select this option if the patient has LVSD. **No (0):** Select this option if the patient does not have LVSD.	Moderate or severe LVSD (see synonyms below) *Note: If multiple diagnostic studies were performed on the same day to measure ejection fraction, use the following hierarchy to determine if LVSD is present:* • *cardiac catheterization* • *echocardiogram* • *MUGA or other cardiac scan*	None

Data Abstraction Definitions (HF)

DATA ELEMENTS/ VARIABLE NAME	INSTRUCTIONS (DEFINITION, VALID VALUES)	SYNONYMS	EXCLUSIONS
LVSD Synonyms– (moderate or severe) **Contractility described as:** • abnormal • compromised • decreased • depressed • impaired • low • poor • reduced • very low Ejection fraction (EF) described as: • abnormal • compromised • decreased • depressed • impaired • low • poor • reduced • very low **Hypokinesis described as:** • diffuse • generalized • global		**Left ventricular dysfunction (LVD) described as:** • marked • moderate • moderate-severe • severe • significant • substantial • the severity is not specified • very severe **Left ventricular ejection fraction (LVEF) described as:** • abnormal • compromised • decreased • depressed • impaired • low • poor • reduced • very low **Left ventricular function (LVF) described as:** • abnormal • compromised • decreased • depressed • impaired • low • poor • reduced	**Left ventricular systolic dysfunction (LVSD) described as:** • marked • moderate • moderate-severe • severe • significant • substantial • the severity is not specified • very severe **Systolic dysfunction described as:** • marked • moderate • moderate-severe • severe • significant • substantial • the severity is not specified • very severe **Systolic function described as:** • abnormal • compromised • decreased • depressed • impaired • low • poor • reduced • very low

Data Abstraction Definitions (HF)

DATA ELEMENTS/ VARIABLE NAME	INSTRUCTIONS (DEFINITION, VALID VALUES)	SYNONYMS	EXCLUSIONS
Hospitalized for Treatment of Heart Failure **[HFHOSPITAL]**	Instruction: Determine if the patient was hospitalized for HF during the measurement period. **Yes (1):** Select this option if the patient was hospitalized for HF during the measurement period. **No (0):** Select this option if the patient was not hospitalized for HF during the measurement period.	None	None
Office/clinic Visit Date **[PCVISITDATE]**	THIS ELEMENT IS SYNCHRONIZED WITH THE OFFICE/CLINIC VISIT DATE ELEMENT IN HTN Instruction: Enter the date of each visit to the office/clinic in MM/DD/YYYY format during the measurement period.	None	None
Weight Measurement **[HFWEIGHT]** **[HFWEIGHTNO]**	Instruction: Determine if the patient's weight was measured at every office/clinic visit during the measurement period. **Yes (1):** Select this option if the patient's weight was measured at this office/clinic visit. **No (0):** Select this option if the patient's weight was not measured for this office/clinic visit. ▪ **Not measured for medical reasons (1):** Select this option if weight was not measured for medical reasons. ▪ **Not measured for patient reasons (2):** Select this option if weight was not measured for patient reasons. ▪ **No documentation of a weight measurement (3):** Select this option if there is no documentation of a weight measurement.	**Medical reasons for not obtaining weight measurement may include:** unable to weigh with weight measurement devices at the office/clinic	None
Blood Pressure Screening **[PCBPMEASURE]** **[PCBPMEASURENO]**	THIS ELEMENT IS SYNCHRONIZED WITH THE BLOOD PRESSURE ELEMENTS IN HTN Instruction: Determine if the patient's BP was recorded at every office/clinic visit during the measurement period. **Yes (1):** Select this option if the patient's BP measurement was recorded at this office/clinic visit. **No (0):** Select this option if the patient's BP measurement was not recorded at this office/clinic visit. ▪ **Not performed for patient reasons (1):** Select this option if a BP measurement was not recorded due to patient reasons. ▪ **Not performed-no reason documented (2):** Select this option if there is no reason documented for a BP not recorded.		None

Data Abstraction Definitions (HF)

DATA ELEMENTS/ VARIABLE NAME	INSTRUCTIONS (DEFINITION, VALID VALUES)	SYNONYMS	EXCLUSIONS
Patient Education **[HFPTEDUCATION]**	Instruction: Determine whether the patient/caregiver received education regarding heart failure during the measurement period. **Yes (1):** Select this option if the patient/caregiver received education regarding heart failure. **No (0):** Select this option if the patient/caregiver did not receive education regarding heart failure. **Patient Reasons (2):** Select this option if the patient/caregiver did not receive education regarding heart failure for patient reasons.	*Patient/caregiver education may consist of one or more of the following:* ▪ Diet (sodium restriction) ▪ Weight monitoring instruction ▪ Symptom management ▪ Physical activity ▪ Smoking cessation ▪ Medication instruction ▪ Minimizing or avoiding use of NSAID ▪ Referral for specific educational or management programs (disease or case management for heart failure services) ▪ Prognosis/end of life issues	None
Beta Blocker Therapy **[HFBBLOCKDRUG]** **[HFBBLOCKDRUGNO]**	Instruction: Determine if the patient was prescribed beta-blocker therapy during the measurement period. **Yes (1):** Select this option if the patient was prescribed beta-blocker therapy. **No (0):** Select this option if the patient was not prescribed beta-blocker therapy. ▪ **Not prescribed for medical reasons (1):** Select this option if the patient was not prescribed beta-blocker therapy for medical reasons. ▪ **Not prescribed for patient reasons (2):** Select this option if the patient was not prescribed beta-blocker therapy for patient reasons. ▪ **Not prescribed-no reason documented (3):** Select this option if there is no reason documented for not prescribing beta-blocker therapy.	**See drug list of beta blockers in table 3** **Medical reasons for not prescribing may include:** Adverse reaction to beta-blockers, asthma, bradycardia < 50 bpm (without beta-blocker therapy) on two consecutive readings (two consecutive readings may occur during a single visit or two consecutive visits), chronic obstructive pulmonary disease, COPD, emphysema, history of Class IV (congestive) heart failure, history of second- or third-degree atrioventricular (AV) block without permanent pacemaker, obstructive chronic bronchitis, sick sinus syndrome, SSS, other reason documented by the practitioner for not prescribing beta-blocker therapy	None

Measurement period:
Baseline = 01/01/04 - 12/31/04; PY1 = 04/01/05 - 03/31/06;
PY2 = 04/01/06 - 03/31/07; PY3 = 04/01/07 - 03/31/08

Data Abstraction Definitions (HF)

DATA ELEMENTS/ VARIABLE NAME	INSTRUCTIONS (DEFINITION, VALID VALUES)	SYNONYMS	EXCLUSIONS
ACE Inhibitor or ARB Therapy **[HFACEIDRUG]** **[HFACEIDRUGNO]**	Instruction: Determine if the patient was prescribed ACE inhibitor or ARB therapy during the measurement period. **Yes (1):** Select this option if the patient was prescribed ACE inhibitor or ARB therapy. **No (0):** Select this option if the patient was not prescribed ACE inhibitor or ARB therapy. ▪ **Not prescribed for medical reasons (1):** Select this option if the patient was not prescribed ACE inhibitor and ARB therapy for medical reasons. ▪ **Not prescribed for patient reasons (2):** Select this option if the patient was not prescribed ACE inhibitor therapy and was not prescribed ARB therapy for patient reasons. ▪ **Not prescribed-no reason documented (3):** Select this option if there is no reason documented for not prescribing ACE inhibitor and ARB therapy.	**See drug list of ACE inhibitors in table 4** **Medical reasons for not prescribing may include:** ACE-associated cough, acute renal failure, adverse reaction to ACE (angiotensin-converting enzyme) inhibitor and ARB (angiotensin receptor blocker), allergy/intolerance to ACE inhibitor and ARB, angioedema , ARF, bilateral renal artery stenosis, BRAS, chronic renal failure, CRF, moderate or severe aortic stenosis, pregnancy, RAS, renal artery stenosis, renal failure, rheumatic aortic stenosis, rheumatic aortic valve obstruction, subaortic stenosis, other reason documented by the practitioner for not prescribing ACE inhibitor and for not prescribing ARB therapy	None

Measurement period:
Baseline = 01/01/04 - 12/31/04; PY1 = 04/01/05 - 03/31/06;
PY2 = 04/01/06 - 03/31/07; PY3 = 04/01/07 - 03/31/08

Data Abstraction Definitions (HF)

DATA ELEMENTS/ VARIABLE NAME	INSTRUCTIONS (DEFINITION, VALID VALUES)	SYNONYMS	EXCLUSIONS
Atrial Fibrillation **[HFAFIB]**	Instruction: Determine if the patient has paroxysmal or chronic atrial fibrillation during the measurement period. **Yes (1):** Select this option if the patient has documented paroxysmal or chronic atrial fibrillation. **No (0):** Select this option if the patient did not have paroxysmal or chronic atrial fibrillation.	Atrial fibrillation, atrial fibrillation listed as chronic or paroxysmal (AF, AFIB, A-fib, atrial fib, auricular fibrillation, auricular fib, fib/flutter)	Atrial flutter (without documentation of AFIB), new onset atrial fibrillation
Warfarin Therapy **[HFWARFDRUG]** **[HFWARFDRUGNO]**	Instruction: Determine if the patient was prescribed warfarin therapy during the measurement period. **Yes (1):** Select this option if the patient was prescribed warfarin therapy. **No (0):** Select this option if the patient was not prescribed warfarin therapy. ▪ **Not prescribed for medical reasons (1):** Select this option if the patient was not prescribed warfarin therapy for medical reasons. ▪ **Not prescribed for patient reasons (2):** Select this option if the patient was not prescribed warfarin therapy for patient reasons. ▪ **Not prescribed-no reason documented (3):** Select this option if there is no reason documented for not prescribing warfarin therapy.	**See drug list of warfarin therapy in table 8** **Medical reasons for not prescribing may include:** allergy/intolerance, patient noncompliance, risk of bleeding or bleeding disorder, other reason documented by the practitioner for not prescribing warfarin therapy	None
Influenza Vaccination **[PCFLUSHOT]** **[PCFLUSHOTNO]**	THIS ELEMENT IS SYNCHRONIZED WITH THE INFLUENZA VACCINATION ELEMENT IN DM Instruction: Determine if the patient received an influenza vaccination during the influenza season (September – February). **Yes (1):** Select this option if the patient received an influenza vaccination during the influenza season. **No (0):** Select this option if the patient did not receive an influenza vaccination during the influenza season. ▪ **Not received for medical reasons (1):** Select this option if the patient did not receive an influenza vaccination for medical reasons. ▪ **Not received for patient reasons (2):** Select this option if the patient did not receive an influenza vaccination for patient reasons. ▪ **Not received – no reason documented (3):** Select this option if there is no reason documented for the patient not receiving an influenza vaccination.	Medical reasons for not receiving an influenza immunization may include: Egg allergy, adverse reaction to influenza vaccine, other reason documented by practitioner for not receiving an influenza immunization	None

Data Abstraction Definitions (HF)

DATA ELEMENTS/ VARIABLE NAME	INSTRUCTIONS (DEFINITION, VALID VALUES)	SYNONYMS	EXCLUSIONS
Pneumonia Vaccination **[PCPNEUMOSHOT]** **[PCPNEUMOSHOTNO]**	THIS ELEMENT IS SYNCHRONIZED WITH THE PNEUMONIA VACCINATION ELEMENT IN DM Instruction: Determine if the patient has ever received a pneumonia vaccination. **Yes (1):** Select this option if the patient has ever received a pneumonia vaccination. **No (0):** Select this option if the patient has never received a pneumonia vaccination. ▪ **Not received for medical reasons (1):** Select this option if the patient has never received a pneumonia vaccination for medical reasons. ▪ **Not received for patient reasons (2):** Select this option if the patient has never received a pneumonia vaccination for patient reasons. ▪ **Not received–no reason documented (3):** Select this option if there is no reason documented for the patient not receiving a pneumonia vaccination.	Medical reasons for not receiving pneumococcal vaccination may include: Anaphylactic reaction, other reason documented by practitioner for not receiving pneumococcal vaccination	None

CORONARY ARTERY DISEASE (CAD) QUALITY OF CARE MEASURES

CAD-1: Antiplatelet Therapy

Description: Percentage of patients with CAD who were prescribed antiplatelet therapy

Source of Measure: CMS/AMA Physician Consortium/ACC/AHA

Clinical Recommendation(s)/Rationale: Routine use of aspirin is recommended in the absence of contraindications. If contraindications exist other antiplatelet therapies may be substituted.[1-4]

(Class 1 Recommendation, Level-A Evidence)[1]

Denominator Statement: All patients with CAD (see appendix A.1) ≥ 18 years of age

- **Excluded population: Medical reasons***
  - Patients with one or more contraindications for not prescribing aspirin/clopidogrel (see appendix B.1)
    - Active bleeding in the previous six months which required hospitalization(s) or transfusion(s)
    - Aspirin/clopidogrel allergy/intolerance
  - Other reason documented by the practitioner for not prescribing aspirin/clopidogrel
  - Patients prescribed ticlopidine or dipyridamole (see table 18)
- **Excluded population: Patient reasons***

*Exclusions only applied if the patient did not receive antiplatelet therapy

Numerator Statement: Patients who were prescribed aspirin or clopidogrel therapy (see tables 1 and 9)

Selected References:

1. Gibbons RF, Abrams J, Chatterjee K, Daley J, Deedwania PC, Douglas JS, Ferguson TB Jr., Fihn SD, Fraker TD Jr., Gardin JM, O'Rourke RA, Pasternak RC, Williams SV. ACC/AHA 2002 guideline update for the management of patients with chronic stable angina: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Committee to Update the 1999 Guidelines for the Management of Patients with Chronic Stable Angina). 2002.
2. Braunwald E., Antman EM, Beasley JW, Califf RM, Cheitlin MD, Hochman JS, Jones RH, Kereiakes D, Kupersmith J, Levin TN, Papine CJ, Schaeffer JW, Smith EE III, Steward DE, Theroux P. ACC/AHA 2002 guideline update for the management of patients with unstable angina and non-ST-segment elevation myocardial infarction: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Committee on the Management of Patients With Unstable Angina). 2002.

3. Ryan RJ, Antman EM, Brooks NH, et al. 1999 update: ACC/AHA guidelines for the management of patients with acute myocardial infarction. A report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Committee on Management of Acute Myocardial Infarction). *J AM Coll Cardiol.* 1999;34:890-911.
4. Eagle KA, Guyton RA, Davidoff R, et al. ACC/AHA guidelines for coronary artery bypass graft surgery: A report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Committee to Revise the 1991 Guidelines for Coronary Artery Bypass Graft Surgery). *J AM Coll Cardiol.* 1999;34:1262-1347.

CAD-2: Drug Therapy for Lowering LDL Cholesterol

Description: Percentage of patients with CAD who were prescribed a lipid-lowering therapy (based on current ATP III guidelines)

Source of Measure: CMS/AMA Physician Consortium/ACC/AHA

Clinical Recommendation(s)/Rationale: The LDL-C treatment goal is <100 mg/dl. Persons with established coronary heart disease (CHD) who have a baseline LDL-C ≥ 130 mg/dl should be started on a cholesterol-lowering drug simultaneously with therapeutic lifestyle changes and control of nonlipid risk factors.[1]
(Class 1 Recommendation, Level-A Evidence) [1]

Denominator Statement: All patients with CAD (see appendix A.1) ≥ 18 years of age

- **Excluded population: Medical reasons***
  - Patients with LDL-C <100 mg/dl (see appendix U.1)
  - Other reason documented by the practitioner for not prescribing lipid-lowering therapy
- **Excluded population: Patient reasons***

*Exclusions only applied if the patient did not receive lipid-lowering therapy

Numerator Statement: Patients who were prescribed a lipid-lowering therapy (see table 2)

Selected References:

1. National Heart, Lung, and Blood Institute. National Cholesterol Education Program (NCEP). Third report of the NCEP on detection, evaluation, and treatment of high blood cholesterol in adults (Adult Treatment Panel III). NIH Publication No. 01-3305.2001.
2.

CAD-3 Beta-Blocker Therapy-Prior Myocardial Infarction (MI)

Description: Percentage of CAD patients with prior MI who were prescribed beta-blocker therapy

Source of Measure: AMA Physician Consortium/ACC/AHA

Clinical recommendation(s)/Rationale: Beta-blocker therapy is recommended for all patients with prior MI in the absence of contraindications.[1-3]
(Class 1 Recommendation, Level-A Evidence)[1]

Denominator Statement: All patients with CAD (see appendix A.1) ≥ 18 years of age who also have prior MI (see appendix D.1)

- **Excluded population: Medical reasons***
  - Documentation of bradycardia < 50 bpm (without beta-blocker therapy) on two consecutive readings, history of Class IV (congestive) heart failure, history of second
    or third-degree atrioventricular (AV) block without permanent pacemaker (see appendix E.1)
  - Other reason documented by the practitioner for not prescribing beta-blocker therapy
- **Excluded population: Patient reasons***

*Exclusions only applied if the patient did not receive beta-blocker therapy

Numerator statement: Patients who were prescribed beta-blocker therapy (see table 3)

Selected References:

1. Gibbons RF, Abrams J, Chatterjee K, Daley J, Deedwania PC, Douglas JS, Ferguson TB Jr., Fihn SD, Fraker TD Jr., Gardin JM, O'Rourke RA, Pasternak RC, Williams SV. ACC/AHA 2002 guideline update for the management of patients with chronic stable angina: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Committee to Update the 1999 Guidelines for the Management of Patients with Chronic Stable Angina). 2002.
2. Braunwald E., Antman EM, Beasley JW, Califf RM, Cheitlin MD, Hochman JS, Jones RH, Kereiakes D, Kupersmith J, Levin TN, Papine CJ, Schaeffer JW, Smith EE III, Steward DE, Theroux P. ACC/AHA 2002 guideline update for the management of patients with unstable angina and non-ST-segment elevation myocardial infarction: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Committee on the Management of Patients With Unstable Angina). 2002.
3. Ryan RJ, Antman EM, Brooks NH, et al. 1999 update: ACC/AHA guidelines for the management of patients with acute myocardial infarction. A report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Committee on Management of Acute Myocardial Infarction). *J AM Coll Cardiol.* 1999;34:890-911.

CAD-4: Blood Pressure

Description: Percentage of patients who had a blood pressure measurement during the last office visit

Source of Measure: AMA Physician Consortium/ACC/AHA

Clinical Recommendation(s)/Rationale:
A blood pressure reading is recommended at every visit.[1] Recommended blood pressure management targets are ≤ 130 mm Hg systolic (Class I Recommendation, Level-A Evidence[2]) and ≤ 85 mm Hg diastolic in patients with CAD and coexisting conditions (e.g., diabetes, heart failure, or renal failure) and < 140/90 mm Hg in patients with CAD and no coexisting conditions.[1,2]

Denominator Statement: All patients with CAD (see appendix A.1) ≥ 18 years of age

- **Excluded population: Medical Reasons***
  - None
- **Excluded population: Patient reasons***

*Exclusions only applied if no blood pressure measurement during the last office visit

Numerator Statement: Patients who had a blood pressure measurement during the last office visit

Selected References:

1. National Heart, Lung, and Blood Institute. National High Blood Pressure Education Program. The sixth report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure. NIH Publication No. 98-4080. 1997.
2. Gibbons, RJ, Chatterjee K, Daley J, et al. American College of Cardiology/American Heart Association/American College of Physicians-American Society of Internal Medicine guidelines for the management of patients with chronic stable angina: A report of the American College of Cardiology/American Heart Association task force on practice guidelines (Committee on the Management of Patients with Chronic Stable Angina). *J Am Coll Cardiol*. 1999;33:2092-2197.

CAD-5: Lipid Profile

Description: Percentage of patients receiving at least one lipid profile during the reporting year

Source of Measure: AMA Physician Consortium/ACC/AHA

Clinical Recommendation(s)/Rationale:
A lipid profile is recommended and should include total cholesterol, high-density lipoprotein cholesterol (HDL-C), low-density lipoprotein cholesterol (LDL-C), and triglycerides.[1,2]

(Class I Recommendation, Level-C Evidence)[1]

Denominator Statement: All patients with CAD (see appendix A.1) ≥ 18 years of age

- **Excluded population: Medical Reasons***
  - Other reason documented by the practitioner for not obtaining at least one lipid profile
- **Excluded population: Patient reasons***

*Exclusions only applied if at least one lipid profile (or ALL component tests) was not obtained

Numerator Statement: Patients who received at least one lipid profile (or ALL component tests) during the measurement period (see appendix U.1)

Selected References:

1. Gibbons, RJ, Chatterjee K, Daley J, et al. American College of Cardiology/American Heart Association/American College of Physicians-American Society of Internal Medicine guidelines for the management of patients with chronic stable angina: A report of the American College of Cardiology/American Heart Association task force on practice guidelines (Committee on the Management of Patients with Chronic Stable Angina). *J Am Coll Cardiol*. 1999;33:2092-2197.
2. Ryan RJ, Antman EM, Brooks NH, et al. 1999 update: ACC/AHA guidelines for the management of patients with acute myocardial infarction. A report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Committee on Management of Acute Myocardial Infarction). *J AM Coll Cardiol.* 1999;34:890-911.

CAD-6: LDL Cholesterol Level

Description: Percentage of patients with most recent LDL cholesterol < 130 mg/dl

Source of Measure: CMS

Clinical Recommendation(s)/Rationale:
The LDL-C treatment goal is < 100 mg/dl. Persons with established coronary heart disease (CHD) who have a baseline LDL-C ≥ 130 mg/dl should be started on a cholesterol-lowering drug simultaneously with therapeutic lifestyle changes and control of non lipid risk factors.[1] (Class I Recommendation, Level-A Evidence)[1]

Denominator Statement: All patients with CAD (see appendix A.1) ≥ 18 years of age with at least one LDL cholesterol test (see appendix U.1)

- **Excluded population: Medical Reasons**
  - None
- **Excluded population: Patient reasons**
  1. None

Numerator Statement: Patients with most recent LDL cholesterol < 130 mg/dl

Selected References:

1. National Heart, Lung, and Blood Institute. National Cholesterol Education Program (NCEP). Third report of the NCEP on detection, evaluation, and treatment of high blood cholesterol in adult (Adult Treatment Panel III). NIH Publication No. 01-3305.2001.

CAD-7: ACE Inhibitor or ARB Therapy

Description: **Percentage of patients with CAD who also have diabetes and/or LVSD who were prescribed ACE inhibitor or ARB therapy**

Source of Measure: AMA Physician Consortium/ACC/AHA

Clinical Recommendation(s)/Rationale: ACE inhibitor use is recommended in all patients with CAD who also have diabetes and/or LVSD.[1]
(Class 1 Recommendation, Level-B Evidence)[1]

ACE inhibitor use is also recommended in patients with CAD or other vascular disease
(Class IIa Recommendation, Level-B Evidence)[1]

In STEMI [ST-elevation myocardial infarction] patients who tolerate ACE inhibitors, an ARB [angiotensin receptor blocker] can be useful as an alternative to ACE inhibitors in the long-term management of STEMI patients, provided there are either clinical or radiological signs of heart failure or LVEF less than 0.40. Valsartan and candesartan have established efficacy for this recommendation.
(Class IIa Recommendation, Level-B Evidence)[2]

Denominator Statement: All patients with CAD (see appendix A.1) ≥ 18 years of age who also have diabetes (see appendix F.1) and /or LVSD (see appendix F.2)

- **Excluded population: Medical reasons***
  - ACE inhibitor and ARB therapy allergy or intolerance
  - ACE inhibitor and ARB contraindications including angioedema, anuric renal failure, moderate or severe aortic stenosis or pregnancy (see appendix G.1)
  - Other reason documented by the practitioner for not prescribing ACE inhibitor and for not prescribing ARB therapy
- **Excluded population: Patient reasons***

*Exclusions only applied if the patient did not receive ACE inhibitor or ARB therapy

Numerator Statement: Patients who were prescribed ACE inhibitor or ARB therapy (see tables 4 and 5)

Selected references:

1. Gibbons RF, Abrams J, Chatterjee K, Daley J, Deedwania PC, Douglas JS, Ferguson TB Jr., Fihn SD, Fraker TD Jr., Gardin JM, O'Rourke RA, Pasternak RC, Williams SV. ACC/AHA 2002 guideline update for the management of patients with chronic stable angina: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Committee to Update the 1999 Guidelines for the Management of Patients with Chronic Stable Angina). 2002.
2. Antman EM, Anbe DT, Armstrong PW, Bates ER, Green LA, Hand M, Hochman JS, Krumholz HM, Kushner FG, Lamas GA, Mullany CJ, Ornato JP, Pearle DL, Sloan MA, Smith SC Jr. ACC/AHA guidelines for the management of patients with ST-elevation myocardial infarction: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Committee to Revise the 1999 Guidelines for the Management of Patients With Acute Myocardial Infarction). 2004.

Coronary Artery Disease (CAD)
Analytic Flowchart

General Inclusion Criteria

All face-to-face office visits with physician, physicians' assistant, or nurse practitioner occurring during the sampling period where at least two visits had a documented diagnosis of coronary artery disease (see appendix A.1)	[CADCONFIRMED] = 1 (see appendix A.1)
AND	**AND**
Patient is 18 years or older at the beginning of the sampling period	01/01/04 (Baseline) – [DATEOFBIRTH] ≥ 18 OR 04/01/05 (PY1) – [DATEOFBIRTH] ≥ 18 OR 04/01/06 (PY2) – [DATEOFBIRTH] ≥ 18 OR 04/01/07 (PY3) – [DATEOFBIRTH] ≥ 18

CAD Clinical Performance Measures

Antiplatelet Therapy (CAD-1): Percentage of patients with CAD who were prescribed antiplatelet therapy

Denominator: All patients with CAD ≥ 18 years of age

Denominator Inclusions

All patients (each unique patient identifier equals one case in the denominator) meeting the inclusion criteria (page 1)	Each unique [PATIENTID] = one case in the denominator **AND** Meeting inclusion criteria (page 1)

Denominator Exclusions (Exclusions only applied if the patient did not receive antiplatelet therapy)

Any visit where- Excluded for Medical Reasons: • patients with aspirin/clopidogrel contraindication [allergy/intolerance, active bleeding in the previous six months which required hospitalization(s) or transfusion(s)] • other reason documented by the practitioner for not prescribing aspirin/clopidogrel • patients prescribed ticlopidine or dipyridamole (see appendix B.1 and table 18) Excluded for Patient Reasons	[CADASPCLODRUGNO] = 1 (see appendix B.1) **OR** [CADASPCLODRUGNO] = 2 (see table 18) **OR** [CADASPCLODRUGNO] = 3

Numerator: Patients who were prescribed aspirin or clopidogrel therapy

Numerator Inclusions

Patients who were either prescribed aspirin or clopidogrel therapy during any clinic/office visit (see tables 1 and 9)	[CADASPCLODRUG] = 1 (see tables 1 and 9)

Drug Therapy for Lowering LDL Cholesterol (CAD-2): Percentage of patients with CAD who were prescribed a lipid-lowering therapy (based on current ATP III guidelines)

Denominator: All patients with CAD ≥ 18 years of age

Denominator Inclusions

All patients (each unique patient identifier equals one case in the denominator) meeting the inclusion criteria (page 1) and who had an LDL Cholesterol completed (see appendix U.1)	Each unique [PATIENTID] = one case in the denominator **AND** Meeting inclusion criteria (page 1) **AND** [PCLDLCTEST] = 1 (see appendix U.1)

Denominator Exclusions (Exclusions only applied if the patient did not receive lipid-lowering therapy)

Any visit where- Excluded for Medical Reasons: • LDL-C <100 mg/dl • other reason documented by the practitioner for not prescribing lipid-lowering therapy Excluded for Patient Reasons	[CADLDLCDRUGNO] = 1 **OR** [CADLDLCDRUGNO] = 2 **OR** [PCLDLCVALUE] <100

Numerator: Patients Who Were Prescribed Lipid-Lowering Therapy

Numerator Inclusions

Patients who were prescribed a lipid-lowering drug during any clinic/office visit (see table 2)	[CADLDLCDRUG] = 1 (see table 2)

Beta-Blocker Therapy – Prior Myocardial Infarction (MI) (CAD-3): Percentage of patients with CAD with prior MI who were prescribed beta-blocker therapy

Denominator: All patients with CAD ≥ 18 years of age who also have prior MI

Denominator Inclusions

All patients (each unique patient identifier equals one case in the denominator) meeting the inclusion criteria (page 1) and those with prior MI (see appendix D.1)	Each unique [PATIENTID] = one case in the denominator **AND** Meeting inclusion criteria (page 1) **AND** [CADMI] = 1 (see appendix D.1)

Denominator Exclusions (Exclusions only applied if the patient did not receive beta-blocker therapy)

Any visit where- Excluded for Medical Reasons: • documentation of bradycardia < 50 bpm (without beta-blocker therapy) on two consecutive readings • history of Class IV (congestive) heart failure • history of 2nd or 3rd degree atrioventricular (AV) block without permanent pacemaker • other reason documented by the practitioner for not prescribing beta-blocker therapy (see appendix E.1) Excluded for Patient Reasons	[CADBBLOCKDRUGNO] = 1 (see appendix E.1) **OR** [CADBBLOCKDRUGNO] = 2

Numerator: Patients who were prescribed beta-blocker therapy

Numerator Inclusions

Patients who were prescribed beta-blocker therapy during any clinic/office visit (see table 3)	[CADBBLOCKDRUG] = 1 (see table 3)

Blood Pressure (CAD-4): Percentage of patients who had a blood pressure measurement during the last office visit

Denominator: All patients with CAD ≥ 18 years of age

Denominator Inclusions

All patients (each unique patient identifier equals one case in the denominator)	Each unique [PATIENTID] = one case in the denominator **AND** Meeting inclusion criteria (page 1)

Denominator Exclusions (Exclusions only applied if no blood pressure measurement during the last office visit)

Last visit where – Excluded for patient reasons	[CADBPNO] = 1

Numerator: Patients who had a blood pressure measurement during the last office visit

Numerator Inclusions

Patients who had a blood pressure measurement during the last office/clinic visit	[CADBP] = 1

Lipid Profile (CAD-5): Percentage of patients receiving at least one lipid profile during the reporting year

Denominator: All patients with CAD ≥ 18 years of age

Denominator Inclusions

All patients (each unique patient identifier equals one case in the denominator)	Each unique [PATIENTID] = one case in the denominator **AND** Meeting inclusion criteria (page 1)

Denominator Exclusions (Exclusions only applied if at least one lipid profile (or ALL component tests) was not obtained

Any visit where- Excluded for Medical Reasons: • other reason documented by the practitioner for not obtaining at least one lipid profile Excluded for patient reasons	[CADLIPIDNO] = 1 **OR** [CADLIPIDNO] = 2

Numerator: Patients who received at least one lipid profile (or ALL components tests) during the measurement period

Numerator Inclusions

Patients who received at least one lipid profile (or ALL components tests) during the measurement period (see appendix U.1)	[CADLIPID] = 1 (see appendix U.1)

LDL Cholesterol Level (CAD-6): Percentage of patients with most recent LDL cholesterol < 130 mg/dl

Denominator: All patients with CAD ≥ 18 years of age with at least one LDL cholesterol test

Denominator Inclusions

All patients (each unique patient identifier equals one case in the denominator) (see appendix U.1)	Each unique [PATIENTID] = one case in the denominator **AND** Meeting inclusion criteria (page 1) **AND** [PCLDLCTEST] = 1 (see appendix U.1)

Denominator Exclusions

None	None

Numerator: Patients with most recent LDL cholesterol < 130 mg/dl

Numerator Inclusions

Patients with most recent LDL-C < 130 mg/dl	[PCLDLCVALUE] < 130 for most recent [PCLDLCDATE]

ACE Inhibitor or ARB Therapy (CAD-7): Percentage of patients with CAD who also have diabetes and/or left ventricular systolic dysfunction (LVSD) who were prescribed ACE inhibitor or ARB therapy

Denominator: All patients with CAD ≥ 18 years of age who also have diabetes and/or LVSD

Denominator Inclusions

All patients (each unique patient identifier equals one case in the denominator) meeting the inclusion criteria (page 1) and who also have diabetes (see appendix F.1) and/or LVSD (defined as ejection fraction < 40% determined by echocardiogram, MUGA, or left ventriculogram) (see appendix F.2)	Each unique [PATIENTID] = one case in the denominator **AND** Meeting inclusion criteria (page 1) **AND** [CADDIABETES] = 1 (see appendix F.1) **AND/OR** [CADLVSD] = 1 (see appendix F.2)

Denominator Exclusions (Exclusions only applied if the patient did not receive ACE inhibitor or ARB therapy)

Any visit where- Excluded for Medical Reasons: • allergy or intolerance to ACE inhibitor and ARB therapy • ACE inhibitor and ARB contraindications including angioedema, anuric renal failure, moderate or severe aortic stenosis, pregnancy • other reason documented by the practitioner for not prescribing ACE inhibitor and not prescribing ARB therapy (see appendix G.1) Excluded for Patient Reasons	[CADACEIDRUGNO] = 1 (see appendix G.1) **OR** [CADACEIDRUGNO] =2

Numerator: Patients who were prescribed ACE inhibitor or ARB therapy

Numerator Inclusions

Patients who were prescribed ACE inhibitor or ARB therapy (see tables 4 and 5)	[CADACEIDRUG] = 1 (see tables 4 and 5)

Measurement period
Baseline = 01/01/04 - 12/31/04; PY1 = 04/01/05 - 03/31/06;
PY2 = 04/01/06 - 03/31/07; PY3 = 04/01/07 - 03/31/08

Data Abstraction Definitions (CAD)

DATA ELEMENTS/ VARIABLE NAME	INSTRUCTIONS (DEFINITION,VALID VALUES)	SYNONYMS	EXCLUSIONS
Confirm Diagnosis of Coronary Artery Disease (CAD) **[CADCONFIRMED]**	Instruction: Determine if the patient has a documented history of CAD. **Yes (1):** Select this option if the patient has a documented history of CAD anywhere in the office/clinic record. **No (0):** Select this option if the patient has no documented history of CAD anywhere in the office/clinic record. (see appendix A.1) **If "No" - STOP ABSTRACTION**	AMI, angina, arteriosclerotic cardiovascular disease, arteriosclerotic heart disease, ASCVD, ASHD, atherectomy, atherosclerotic cardiovascular disease, atherosclerotic heart disease, CABG, CAD, cardiovascular (heart) disease, CHD, chronic myocardial ischemia, chronic stable angina, coronary arterio-sclerosis, coronary artery bypass graft, coronary artery disease, coronary disease, coronary endarteritis, coronary heart disease, coronary insufficiency, coronary vascular disease, CVD, ischemic heart disease, MI, myocardial infarction (current or history), PCI, percutaneous transluminal coronary angio-plasty, post cardiac/coronary injury, PTCA, rotablator, S/P MI, status-post myocardial infarction, stent (coronary), unstable angina	Chest pain, unspecified Chest wall pain
Blood Pressure **[CADBP]** **[CADBPNO]**	Instruction: Determine if a blood pressure (BP) was obtained during the last office visit within the measurement period. **Yes (1):** Select this option if a BP was obtained during the last office visit. **No (0):** Select this option if a BP was not obtained during the last office visit. ▪ **Not performed for patient reasons (1):** Select this option if a BP was not obtained for patient reasons. ▪ **Not performed–no reason documented (2):** Select this option if there is no reason documented for not obtaining a BP.		None

Measurement period
Baseline = 01/01/04 - 12/31/04; PY1 = 04/01/05 - 03/31/06;
PY2 = 04/01/06 - 03/31/07; PY3 = 04/01/07 - 03/31/08

Data Abstraction Definitions (CAD)

DATA ELEMENTS/ VARIABLE NAME	INSTRUCTIONS (DEFINITION,VALID VALUES)	SYNONYMS	EXCLUSIONS
Antiplatelet Therapy **[CADASPCLODRUG]** **[CADASPCLODRUGNO]**	Instruction: Determine if the patient was prescribed aspirin or clopidogrel therapy during the measurement period. **Yes (1):** Select this option if the patient was prescribed aspirin or clopidogrel therapy. **No (0):** Select this option if the patient was not prescribed aspirin or clopidogrel therapy. ▪ **Not prescribed for medical reasons (1):** Select this option if the patient was not prescribed aspirin or clopidogrel therapy for medical reasons. ▪ **Prescribed ticlopidine or dipyridamole (2):** Select this option if the patient was prescribed ticlopidine or dipyridamole. ▪ **Not prescribed for patient reasons (3):** Select this option if the patient was not prescribed aspirin or clopidogrel therapy for patient reasons. ▪ **Not prescribed-no reason documented (4):** Select this option if there is no reason documented for not prescribing aspirin or clopidogrel therapy.	**See drug list of aspirin containing agents (table 1), clopidogrel (table 9) and ticlopidine and dipyridamole (table 18)** Medical reasons for not prescribing may include: **Active bleeding in the previous six months which required hospitalization(s) or transfusion(s), alcoholic liver damage, allergy or intolerance, anemia due to blood loss, angioedema due to aspirin, blood dyscrasia, cirrhosis, duodenal ulcer, end-stage liver disease, esophageal varices, fatty liver, gastric ulcer, gastritis, gastrojejunal ulcer, GI bleeding, G-J ulcer, hemorrhage, hepatic coma, hepatic failure, hepatic infarction, hepatitis, iron deficiency anemia, liver abscess, liver disease, liver failure, peptic ulcer, platelet abnormality, portal hypertension, pregnancy, PUD, thrombocytopenia, other reason documented by the practitioner for not prescribing aspirin or clopidogrel therapy**	None

DATA ELEMENTS/ VARIABLE NAME	INSTRUCTIONS (DEFINITION,VALID VALUES)	SYNONYMS	EXCLUSIONS
Lipid Profile **[CADLIPID]** **[CADLIPIDNO]**	Instruction: Determine if a lipid profile was performed during the measurement period. **Yes (1):** Select this option if a lipid profile was performed **No (0):** Select this option if a lipid profile was not performed. • **Not performed medical reasons (1):** Select this option if a lipid profile was not performed for medical reasons. • **Not performed patient reasons (2):** Select this option if a lipid profile was not performed for patient reasons. • **Not performed-no reason documented (3):** Select this option if there is no reason documented for not performing a lipid profile.	Cholesterol analysis, cholesterol panel, cholesterol profile, fasting lipids, lipid analysis, lipid panel, lipids, lipoprotein analysis *Note: A lipid profile consists of all of the following components:* • *Total cholesterol* • *High-density lipoprotein cholesterol (HDL-C)* • *Low-density lipoprotein cholesterol (LDL-C)* • *Triglycerides* *If LDL-C could not be calculated due to high triglycerides, count as complete lipid profile.* **Medical reasons for not performing lipid profile:** Other reason documented by the practitioner for not obtaining at least one lipid profile	None

Data Abstraction Definitions (CAD)

DATA ELEMENTS/ VARIABLE NAME	INSTRUCTIONS (DEFINITION,VALID VALUES)	SYNONYMS	EXCLUSIONS
LDL Cholesterol Test **[PCLDLCTEST]** **[PCLDLCDATE]** **[PCLDLCVALUE]** **[PCLDLCTEST]** **[PCLDLCTESTNO]**	THIS ELEMENT IS SYNCHRONIZED WITH THE LDL ELEMENT IN DM Instruction: Determine if the patient had one or more LDL-C tests during the measurement period. **Yes (1):** Select this option if the patient had one or more LDL-C tests. ▪ *Record the most recent date the blood was drawn for LDL Cholesterol in MM/DD/YYYY format.* ▪ *Record the most recent LDL-C value [if laboratory unable to calculate LDL-C value due to high triglycerides, record 0 (zero)]* **No (0):** Select this option if the patient did not have one or more LDL-C tests. ▪ **Not performed for medical reasons (1):** Select this option if the LDL-C test was not performed for medical reasons. ▪ **Not performed for patient reasons (2):** Select this option if the LDL-C test was not performed for patient reasons. ▪ **Not performed-no reason documented (3):** Select this option if there is no reason documented for not performing a LDL-C test.	Cholesterol analysis, cholesterol panel, cholesterol profile, fasting lipids, LDL:HDL, LDL:HDL ratio, lipid analysis, lipid panel, lipid profile, lipids, lipoprotein analysis, low density lipoprotein (LDL), LDL-Cholesterol, LDL-C Use the following priority ranking: ▪ Lab report draw date ▪ Lab report date ▪ Flow sheet documentation ▪ Practitioner notes ▪ Other documentation	None

DATA ELEMENTS/ VARIABLE NAME	INSTRUCTIONS (DEFINITION,VALID VALUES)	SYNONYMS	EXCLUSIONS
Drug Therapy for Lowering LDL Cholesterol **[CADLDLCDRUG]** **[CADLDLCDRUGNO]**	Instruction: Determine if the patient was prescribed drug therapy for lowering LDL Cholesterol during the measurement period. **Yes (1):** Select this option if the patient was prescribed drug therapy for lowering LDL Cholesterol. **No (0):** Select this option if the patient was not prescribed drug therapy for lowering LDL Cholesterol. ▪ **Not prescribed for medical reasons (1):** Select this option if the patient was not prescribed drug therapy for lowering LDL Cholesterol for medical reasons. ▪ **Not prescribed for patient reasons (2):** Select this option if the patient was not prescribed drug therapy for lowering LDL Cholesterol for patient reasons. ▪ **Not prescribed-no reason documented (3):** Select this option if there is no reason documented for not prescribing drug therapy for lowering LDL Cholesterol.	**See drug list of lipid-lowering agents in table 2** **Medical reasons for not prescribing may include:** LDL-C < 100 mg/dl, other reason documented by the practitioner for not prescribing lipid-lowering therapy	None
Myocardial Infarction (MI) **[CADMI]**	Instructions: Determine if the patient has a documented history of a MI (new or old). **Yes (1):** Select this option if the patient has a documented history of an MI. **No (0):** Select this option if the patient does not have a documented history of an MI.	MI, AMI, cardiac infarction, coronary artery embolism, coronary artery occlusion, coronary artery rupture, coronary artery thrombosis, infarction of heart, infarction of myocardium, infarction of ventricle, anterolateral infarction, anterior infarction, anteroapical infarction, anteroseptal infarction, inferolateral infarction, inferoposterior infarction, inferior infarction, diaphragmatic wall infarction, lateral infarction, apical-lateral infarction, basal-lateral infarction, high lateral infarction, posterolateral infarction, posterior infarction, posterobasal infarction, subendocardial infarction, nontransmural infarction, infarction of atrium, infarction of papillary muscle, infarction of septum, thrombotic coronary artery, non-Q-wave MI, transmural myocardial infarction	None

Measurement period
Baseline = 01/01/04 - 12/31/04; PY1 = 04/01/05 - 03/31/06;
PY2 = 04/01/06 - 03/31/07; PY3 = 04/01/07 - 03/31/08

Data Abstraction Definitions (CAD)

DATA ELEMENTS/ VARIABLE NAME	INSTRUCTIONS (DEFINITION,VALID VALUES)	SYNONYMS	EXCLUSIONS
Beta-Blocker Therapy **[CADBBLOCKDRUG]** **[CADBBLOCKDRUGNO]**	Instruction: Determine if the patient was prescribed beta-blocker therapy during the measurement period. **Yes (1):** Select this option if the patient was prescribed beta-blocker therapy. **No (0):** Select this option if the patient was not prescribed beta-blocker therapy. ▪ **Not prescribed for medical reasons (1):** Select this option if the patient was not prescribed beta-blocker therapy for medical reasons. ▪ **Not prescribed for patient reasons (2):** Select this option if the patient was not prescribed beta-blocker therapy for patient reasons. ▪ **Not prescribed-no reason documented (3):** Select this option if there is no reason documented for not prescribing beta-blocker therapy.	**See drug list of beta-blockers in table 3** **Medical reasons for not prescribing may include:** Adverse reaction to beta-blockers, asthma, documentation of bradycardia < 50 bpm (without beta-blocker therapy) on two consecutive readings (two consecutive readings may occur during a single visit or two consecutive visits), chronic obstructive pulmonary disease, COPD, emphysema, history of Class IV (congestive) heart failure, history of second- or third-degree atrioventricular (AV) block without permanent pacemaker, obstructive chronic bronchitis, sick sinus syndrome, SSS, other reason documented by the practitioner for not prescribing beta-blocker therapy	None
Diabetes **[CADDIABETES]**	Instructions: Determine if the patient has diabetes. **Yes (1):** Select this option if the patient has diabetes. **No (0): Select this option if the patient does not have diabetes**.	Diabetes mellitus, diabetes, Type II diabetes, IDDM, insulin dependent diabetes mellitus, NIDDM, non-insulin dependent diabetes mellitus, Type I diabetes	None
Left Ventricular Systolic Dysfunction (LVSD) **[CADLVSD]**	Instructions: Determine if the patient has LVSD (use most recent result). LVSD is present when left ventricular ejection fraction (LVEF) is less than 40% or documented as moderate to severe. **Yes (1):** Select this option if the patient has LVSD. **No (0):** Select this option if the patient does not have LVSD.	Moderate or severe LVSD (see synonyms below) *Note: If multiple diagnostic studies were performed on the same day to measure ejection fraction, use the following hierarchy to determine if LVSD is present:* • *cardiac catheterization* • *echocardiogram* • *MUGA or other cardiac scan*	None

Measurement period
Baseline = 01/01/04 - 12/31/04; PY1 = 04/01/05 - 03/31/06; PY2 = 04/01/06 - 03/31/07; PY3 = 04/01/07 - 03/31/08

Data Abstraction Definitions (CAD)

DATA ELEMENTS/ VARIABLE NAME	INSTRUCTIONS (DEFINITION,VALID VALUES)	SYNONYMS	EXCLUSIONS
LVSD Synonyms– (moderate or severe) **Contractility described as:** • abnormal • compromised • decreased • depressed • impaired • low • poor • reduced • very low **Ejection fraction (EF) described as:** • abnormal • compromised • decreased • depressed • impaired • low • poor • reduced • very low **Hypokinesis described as:** • diffuse • generalized • global		**Left ventricular dysfunction (LVD) described as:** • marked • moderate • moderate-severe • severe • significant • substantial • the severity is not specified • very severe **Left ventricular ejection fraction (LVEF) described as:** • abnormal • compromised • decreased • depressed • impaired • low • poor • reduced • very low Left ventricular function (LVF) described as: • abnormal • compromised • decreased • depressed • impaired • low • poor • reduced	**Left ventricular systolic dysfunction (LVSD) described as:** • marked • moderate • moderate-severe • severe • significant • substantial • the severity is not specified • very severe **Systolic dysfunction described as:** • marked • moderate • moderate-severe • severe • significant • substantial • the severity is not specified • very severe **Systolic function described as:** • abnormal • compromised • decreased • depressed • impaired • low • poor • reduced • very low

Data Abstraction Definitions (CAD)

DATA ELEMENTS/ VARIABLE NAME	INSTRUCTIONS (DEFINITION,VALID VALUES)	SYNONYMS	EXCLUSIONS
ACE Inhibitor Therapy **[CADACEIDRUG]** **[CADACEIDRUGNO]**	Instruction: Determine if the patient was prescribed ACE inhibitor or ARB therapy during the measurement period. **Yes (1):** Select this option if the patient was prescribed ACE inhibitor or ARB therapy. **No (0):** Select this option if the patient was not prescribed ACE inhibitor or ARB therapy. ▪ **Not prescribed for medical reasons (1):** Select this option if the patient was not prescribed ACE inhibitor and ARB therapy for medical reasons. ▪ **Not prescribed for patient reasons (2):** Select this option if the patient was not prescribed ACE inhibitor and ARB therapy for patient reasons. ▪ **Not prescribed-no reason documented (3):** Select this option if there is no reason documented for not prescribing ACE inhibitor and not prescribing ARB therapy.	**See drug list of ACE inhibitors in table 4** **Medical reasons for not prescribing may include:** ACE-associated cough, acute renal failure, adverse reaction to ACE (angiontesin-converting enzyme) inhibitor, allergy/intolerance to ACE (angiotensin-converting enzyme) inhibitor, angioedema (due to ACE inhibitor), ARF, bilateral renal artery stenosis, BRAS, chronic renal failure, CRF, hypotension, moderate or severe aortic stenosis, patient on angiotension receptor blockers (ARB), pregnancy, RAS, renal artery stenosis, renal failure, rheumatic aortic stenosis, rheumatic aortic valve obstruction, subaortic stenosis, other reason documented by the practitioner for not prescribing ACE inhibitor therapy	None

HYPERTENSION (HTN) QUALITY OF CARE MEASURES

HTN-1: Blood Pressure Screening

Description: Percentage of patient visits with blood pressure (BP) measurement recorded

Source of Measure: CMS/AMA Physician Consortium/ACC/AHA

Clinical Recommendation(s)/Rationale:
Obtaining proper blood pressure (BP) measurements at each health care encounter is recommended for hypertension detection. Repeated BP measurements (≥ 2 per patient visit) will determine if initial elevations persist and require prompt attention.[1-3]
(Level 1 Recommendation, Level-A Evidence) [3]

Denominator Statement: All visits (see appendix K.1) for patients with HTN (see appendix O.1) ≥ 18 years of age

- **Excluded population: Medical Reasons***
  - None
- **Excluded population: Patient reasons***

*Exclusions only applied if blood pressure was not recorded

Numerator Statement: Patient visits with blood pressure measurement recorded

Selected References:

1. National Heart, Lung, and Blood Institute. National High Blood Pressure Education Program. The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure. NIH Publication No. 03-5233. May 2003.
2. Schwartz G, Canzanello V, Woolley A, et al. Hypertension, diagnosis and treatment. Institute for Clinical Systems Improvement (ICSI). 2002;42
3. Chandler JM, Connito D, Demme RA, Et al. Diagnosis and management of hypertension in the primary care setting. Department of Veterans Affairs (US). May 1999.

HTN-2: Blood Pressure Control

Description: Percentage of patients with last BP < 140/90 mm Hg

Source of Measure: CMS/NCQA

Clinical Recommendation(s)/Rationale:
Classification of adult BP is useful for making treatment decisions and is based on the average of ≥ 2 readings taken at each of 2 or more visits after an initial screening. Hypertension is the most common primary diagnosis in America. Current control rates (SBP < 140 mm Hg and DBP < 90 mm Hg) though improved, are still far below the Healthy People 2010 goal of 50 percent; 30 percent are still unaware they have hypertension.[1]

Denominator Statement: All patients with HTN (see appendix O.1) ≥ 18 years of age who had a blood pressure measurement during the last office visit

- **Excluded population: Medical Reasons***
  - None
- **Excluded population: Patient reasons***

*Exclusions only applied if last BP not recorded

Numerator Statement: Patients with last systolic blood pressure measurement < 140 mm Hg *and* a diastolic blood pressure < 90 mm Hg

Selected References:

1. National Heart, Lung, and Blood Institute. National High Blood Pressure Education Program. The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure. NIH Publication No. 03-5233. May 2003.

HTN-3: Plan of Care

Description: Percentage of patient visits with either systolic blood pressure ≥ 140 mm Hg *or* diastolic blood pressure ≥ 90 mm Hg with documented plan of care for hypertension

Source of Measure: AMA Physician Consortium/ACC/AHA

Clinical Recommendation(s)/Rationale:
Nonpharmacological therapy is recommended and may include weight reduction, decreased sodium and alcohol intake and exercise.[1]

Frequent follow-up visits are recommended.[2]

After initiation of the initial therapy, a follow-up visit is recommended within 1-2 months, to assess hypertension control, patient compliance to treatment, and adverse effects. (Level 1 Recommendation, Level-C Evidence[3])

Denominator Statement: All visits (appendix K.1) for patients with HTN (see appendix O.1) ≥ 18 years of age with either systolic blood pressure ≥ 140 mm Hg *or* diastolic blood pressure ≥ 90 mm Hg

- **Excluded population: Medical Reasons***
  - None
- **Excluded population: Patient reasons***

*Exclusions only applied if plan of care was not documented

Numerator Statement: Patient visits with a documented plan of care for hypertension

Selected References

1. Williams MA, Fleg JL, Ades PA, et al. Secondary prevention of coronary artery disease in the elderly (With Emphasis on Patients > 75 Years of Age). An AHA Scientific Statement from the Council on Clinical Cardiology Subcommittee on Exercise, Cardiac Rehabilitation, and Prevention. *Circulation*. 2002; 105:1735.
2. 1999 World Health Organization – International Society of Hypertension Guidelines for the management of hypertension. Guidelines Subcommittee. *Journal of Hypertension*. 1999; 17:151-183.
3. Chandler JM, Connito D, Demme RA, Et al. Diagnosis and management of hypertension in the primary care setting. Department of Veterans Affairs (US). May 1999.

Hypertension (HTN)
Analytic Flowchart

General Inclusion Criteria

All face-to-face office visits with physician, physicians' assistant, or nurse practitioner occurring during the sampling period where at least two visits had a documented diagnosis of hypertension (see appendix O.1) **AND** Patient is 18 years or older at the beginning of the sampling period	[HTNCONFIRMED] = 1 (see appendix O.1) **AND** 01/01/04 (Baseline) – [DATEOFBIRTH] ≥ 18 OR 04/01/05 (PY1) – [DATEOFBIRTH] ≥ 18 OR 04/01/06 (PY2) – [DATEOFBIRTH] ≥ 18 OR 04/01/07 (PY3) – [DATEOFBIRTH] ≥ 18

HTN Clinical Performance Measures

Blood Pressure Screening (HTN-1): Percentage of patient visits with blood pressure (BP) measurement recorded

Denominator: All visits for patients with HTN ≥ 18 years of age

Denominator Inclusions

All visits (see appendix K.1) meeting the inclusion criteria (page 1)	Each [PCVISITDATE] = one case in the denominator (see appendix K.1) **AND** Meeting inclusion criteria (page 1)

Denominator Exclusions (Exclusions only applied if BP was not recorded)

Each HTN visit where – Excluded for patient reasons	Each [PCVISITDATE] **WITH** [PCBPMEASURENO] = 1

Numerator: Patient visits with blood pressure measurement recorded

Numerator Inclusions

Patient visits with blood pressure measurement recorded	Each [PCVISITDATE] **WITH** [PCBPMEASURE] = 1

Blood Pressure Control (HTN-2): Percentage of patients with last BP < 140/90 mm Hg

Denominator: All patients with HTN ≥ 18 years of age who had a blood pressure measurement during the last office visit

Denominator Inclusions

All patients (each unique patient identifier equals one case in the denominator) meeting the inclusion criteria (page 1)	Each unique [PATIENTID] = one case in the denominator **AND** Meeting inclusion criteria (page 1) **AND** Most recent [PCVISITDATE] **WITH** [PCBPMEASURE] = 1

Denominator Exclusions (Exclusions only applied if last BP not recorded)

Last visit where – Excluded for patient reasons	Most recent [PCVISITDATE] **WITH** [PCBPMEASURENO] = 1

Numerator: Patients with last systolic blood pressure measurement < 140 mm Hg and a diastolic blood pressure < 90 mm Hg

Numerator Inclusions

Patients with last systolic blood pressure measurement < 140 mm Hg and a diastolic blood pressure < 90 mm Hg	Most recent [PCVISITDATE] **WITH** [PCBPSYSTOLIC] < 140 **AND** [PCBPDIASTOLIC] < 90

Plan of Care (HTN-3): Percentage of patient visits with either systolic blood pressure ≥ 140 mm Hg or diastolic blood pressure ≥ 90 mm Hg with documented plan of care for hypertension

Denominator: All visits for patients with HTN ≥ 18 years of age with either systolic blood pressure ≥ 140 mm Hg or diastolic blood pressure ≥ 90 mm Hg

Denominator Inclusions

All visits (see appendix K.1) meeting the inclusion criteria (page 1) with either systolic blood pressure ≥ 140 mm Hg or diastolic blood pressure ≥ 90 mm Hg	Each [PCVISITDATE] = one case in the denominator (see appendix K.1) **AND** Meeting inclusion criteria (page 1) **WITH** [PCBPSYSTOLIC] ≥ 140 **OR** [PCBPDIASTOLIC] ≥ 90

Denominator Exclusions (Exclusions only applied if plan of care was not documented)

Each visit where- Excluded for Patient Reasons	Each [PCVISITDATE] **WITH** [HTNBPPLANDOC] = 3

Numerator: Patient visits with a documented plan of care for hypertension

Numerator Inclusions

Patient visits with a documented plan of care for hypertension	Each [PCVISITDATE] **WITH** [HTNBPPLANDOC] = 1

Measurement period:
Baseline = 01/01/04 - 12/31/04; PY1 = 04/01/05 - 03/31/06;
PY2 = 04/01/06 - 03/31/07; PY3 = 04/01/07 - 03/31/08

Data Abstraction Definitions (HTN)

DATA ELEMENTS/ VARIABLE NAME	INSTRUCTIONS (DEFINITION,VALID VALUES)	SYNONYMS	EXCLUSIONS
Confirm Diagnosis of Hypertension (HTN) **[HTNCONFIRMED]**	Instruction: Determine if the patient has a documented history of HTN. **Yes (1):** Select this option if the patient has a documented history of HTN anywhere in the office/clinic record. **No (0):** Select this option if the patient has no documented history of HTN anywhere in the office/clinic record. (see appendix O.1) **If "No" - STOP ABSTRACTION**	Benign hypertension, malignant hypertension, hypertensive heart disease, hypertensive renal disease, hypertensive heart and renal disease	None
Office/clinic Visit Date **[PCVISITDATE]**	THIS ELEMENT IS SYNCHRONIZED WITH THE OFFICE/CLINIC VISIT DATE ELEMENT FROM HF Instruction: Enter the date of each visit to the office/clinic in MM/DD/YYYY format during the measurement period.	None	None
Blood Pressure Screening **[PCBPMEASURE]** **[PCBPSYSTOLIC]** **[PCBPDIASTOLIC]** **[PCBPMEASURE]** **[PCBPMEASURENO]**	THIS ELEMENT IS SYNCHRONIZED WITH THE BLOOD PRESSURE SCREENING ELEMENT FROM HF Instruction: Determine if the patient's BP was recorded at every office/clinic visit during the measurement period. **Yes (1):** Select this option if the patient's BP measurement was recorded at this office/clinic visit. ▪ *Enter the systolic BP recorded during this visit in mm Hg* ▪ *Enter the diastolic BP recorded during this visit in mm Hg* **No (0):** Select this option if the patient's BP measurement was not recorded at this office/clinic visit. ▪ **Not performed for patient reasons (1):** Select this option if a BP measurement was not recorded due to patient reasons. ▪ **Not performed-no reason documented (2):** Select this option if there is no reason documented for a BP not recorded.	*Note: If multiple blood pressure measurements are recorded at a single visit, use the following priority ranking to select one:* ▪ If available, record the lowest diastolic BP measured by a physician. If BP taken by physician in multiple positions, record using priority ranking: 1) sitting, 2) supine, 3) standing. ▪ If BP not measured by a physician, record the lowest diastolic BP measured by a nurse. If BP taken by nurse in multiple positions, record using priority ranking: 1) sitting, 2) supine, 3) standing. ▪ If BP not measured by a physician or nurse, record the lowest diastolic BP measured by any other health care provider. If BP taken in multiple positions by other health care provider, record using priority ranking: 1) sitting, 2) supine, 3) standing.	None

Measurement period:
Baseline = 01/01/04 - 12/31/04; PY1 = 04/01/05 - 03/31/06;
PY2 = 04/01/06 - 03/31/07; PY3 = 04/01/07 - 03/31/08

Data Abstraction Definitions (HTN)

DATA ELEMENTS/ VARIABLE NAME	INSTRUCTIONS (DEFINITION,VALID VALUES)	SYNONYMS	EXCLUSIONS
Plan of Care **[HTNBPPLANDOC]**	Instruction: Determine if a plan of care for hypertension management was documented if either systolic BP ≥ 140 mm Hg *or* diastolic BP ≥ 90 mm Hg during the measurement period. **Documented plan of care (1):** Select this option if there was a documented plan of care. **No documented plan of care (2):** Select this option if there was no documented plan. **No documented plan of care-patient reasons (3):** Select this option if there was no documented plan of care for patient reasons.	*Plan of care may include:* ▪ Pharmacological therapy (i.e. reference to medication management, continue same medications, no change in medications, adjustment of medication) ▪ Return visit for BP ▪ Continue to monitor BP ▪ Weight reduction ▪ Low sodium diet ▪ Increase exercise ▪ Decrease alcohol intake	

PREVENTIVE CARE (PC) QUALITY OF CARE MEASURES

PC-5: Breast Cancer Screening (Administrative/EHR measure for DOQ)

Description: The percentage of women 50 – 69 years who had a mammogram during the measurement year or year prior to the measurement year

Source of Measure: CMS/NCQA(H)

Clinical Recommendation(s)/Rationale:
Mammography is the most efficacious method of diagnosing breast cancer, determining about 90 percent of breast cancers in asymptomatic women. Recommend mammograms for women beginning at age 40, with an annual interval for screening or every one to two years.[1-3]

Denominator Statement: All female patients ≥ 50 and ≤ 69 years of age

- **Excluded population: Medical Reasons***
  - Bilateral mastectomy (see appendices JJ.1 and JJ.2)
  - Other reason documented by the practitioner for not performing a mammogram
- **Excluded population: Patient reasons***

*Exclusions only applied if the patient did not receive a mammogram

Numerator Statement: Female patients who had a mammogram (appendices KK.1 and KK.2) during the measurement period or year prior to the measurement period

Selected References:

1. U.S. Preventive Services Task Force (USPSTF). Recommendations and rationale: screening for breast cancer. Available at: http://www.ahrq.gov/clinic/3rduspstf/breastcancer/brcanrr.htm. Accessed March 2004.
2. American Medical Association. Mammographic screening for asymptomatic women. Available at: http://www.ama-assn.org/ama/pub/article/2036-2346.html. Accessed March 2004.
3. National Cancer Institute. NCI statement on mammography screening. Available at: http://www.cancer.gov/newscenter/mammstatement31jan02. Accessed March 2004.

PC-6: Colorectal Cancer Screening

Description: Percentage of patients screened for colorectal cancer during the one-year measurement period

Source of Measure: AMA Physician Consortium

Clinical Recommendation(s)/Rationale: Annual screening for colorectal cancer is strongly recommended for men and women aged ≥ 50 years.[1-5]

- Fecal occult blood testing (FOBT) annually
- Flexible sigmoidoscopy every 5 years
- Annual FOBT plus flexible sigmoidoscopy every 5 years
- Double-contrast barium enema every 5 years
- Colonoscopy every 10 years

(B Recommendation, Level-1, 11-1, 11-2 Evidence[5])

Denominator Statement: All patients who are ≥ 50 years of age at the beginning of the measurement period

- **Excluded population: Medical Reasons***
  - Documentation of medical reason(s) for not providing colorectal cancer screening (e.g. total colectomy, terminal illness)
    (see appendix CC.1)
  - Other reason documented by practitioner for not performing colorectal cancer screening
- **Excluded population: Patient reasons***

*Exclusions only applied if screening for colorectal cancer not performed

Numerator Statement: Patients with any of the recommended colorectal cancer screening test(s) performed (see appendix DD.1)

Selected References:

1. American Academy of Family Physicians. AAFP summary of policy recommendations for periodic health examinations. Available at: http://www.aafp.org/x10601.xml. Accessed Januray 2004.
2. American Cancer Society. American Cancer Society Guidelines on Screening and Surveillance for the Early Detection of Adenomatous Polyps and Colorectal Cancer Update 2001. Available at: http://www.cancer.org/docroot/PRO/content/PRO_1_1_Colorectal_Cancer_Screening_Guidelines_2001.asp. Accessed January 2004.
3. Partnership for Prevention. Priorities in prevention: Colorectal cancer screening – April 2000. Available at: http://www.prevent.org/pip.cfm. Accessed Januray 2004.
4. Winawer S, Fletcher R, Douglas R, et al, for the US Multisociety Task Force on Colorectal Cancer. Colorectal cancer screening and surveillance: Clinical guidelines and rationale – Update based on new evidence. *Gastroenterology*. 2003; 124:544-560.

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Preventive Care (PC)
Analytic Flowchart

General Inclusion Criteria

All face-to-face office visits with physician, physicians' assistant, or nurse practitioner occurring during the sampling period with at least two visits Patient is 18 years or older at the beginning of the sampling period	01/01/04 (Baseline) – [DATEOFBIRTH] ≥ 18 OR 04/01/05 (PY1) – [DATEOFBIRTH] ≥ 18 OR 04/01/06 (PY2) – [DATEOFBIRTH] ≥ 18 OR 04/01/07 (PY3) – [DATEOFBIRTH] ≥ 18

PC Clinical Performance Measures

Breast Cancer Screening (PC-5): Percentage of women 50-69 years who had a mammogram during the measurement year or year prior to the measurement year

Denominator: All female patients ≥ 50 and ≤ 69 years of age at the beginning of the measurement period

All female patients (each unique female patient identifier equals one case in the denominator) meeting the inclusion criteria (page one) and aged ≥ 50 and ≤ 69 at the beginning of the measurement period The beginning dates are: Baseline = 01/01/04; PY1 = 04/01/05; PY2 = 04/01/06; and PY3 = 04/01/07	Each unique [PATIENTID] with {GENDER] = 2 = one case in the denominator **AND** Meeting inclusion criteria (page one) **AND** 01/01/04 (Baseline) – [DATEOFBIRTH] ≥ 50 and ≤ 69 04/01/05 (PY1) – [DATEOFBIRTH] ≥ 50 and ≤ 69 04/01/06 (PY2) – [DATEOFBIRTH] ≥ 50 and ≤ 69 04/01/07 (PY3) – [DATEOFBIRTH] ≥ 50 and ≤ 69

Denominator Exclusions (Exclusions only applied if screening for breast cancer not performed)

Any visit where- Excluded for Medical Reasons: • documentation of medical reason(s) for not providing breast cancer screening (e.g., bilateral mastectomy, terminal illness) • other reason documented by practitioner for not performing breast cancer screening (see appendices JJ.1 and JJ.2) Excluded for Patient Reasons	[PCMAMMOGRAMNO] = 1 (see appendix JJ.1 and JJ.2) **OR** [PCMAMMOGRAMNO] = 2

Numerator: Female patients who had a mammogram (appendices KK.1 and KK.2) during the measurement period or year prior to the measurement period

Numerator Inclusions

Patients with mammography performed (see appendices KK.1 and KK.2)	[PCMAMMOGRAM] = 1 (see appendices KK.1 and KK.2)

Colorectal Cancer Screening (PC-6): Percentage of patients screened for colorectal cancer during the one-year measurement period

Denominator: All patients who are ≥ 50 years of age at the beginning of the measurement period

All patients (each unique patient identifier equals one case in the denominator) meeting the inclusion criteria (page one) and aged ≥ 50 at the beginning of the measurement period	Each unique [PATIENTID] = one case in the denominator **AND** Meeting inclusion criteria (page one) **AND** 01/01/04 (Baseline) – [DATEOFBIRTH] ≥ 50 OR 04/01/05 (PY1) – [DATEOFBIRTH] ≥ 50 OR 04/01/06 (PY2) – [DATEOFBIRTH] ≥ 50 OR 04/01/07 (PY3) – [DATEOFBIRTH] ≥ 50

Denominator Exclusions (Exclusions only applied if screening for colorectal cancer not performed)

Any visit where- Excluded for Medical Reasons: • documentation of medical reason(s) for not providing colorectal cancer screening (e.g., total colectomy, terminal illness) • other reason documented by practitioner for not performing colorectal cancer screening (see appendix CC.1) Excluded for Patient Reasons	[PCFOBTPERFORMNO] = 1 (see appendix CC.1) **OR** [PCFOBTPERFORMNO] = 2

Numerator: Patients with any of the recommended colorectal cancer screening test(s) performed

Numerator Inclusions

Patients with any of the recommended colorectal cancer screening test(s) performed (see appendix DD.1)	[PCFOBTPERFORM] = 1 (see appendix DD.1)

Measurement period:
Baseline = 01/01/04 - 12/31/04; PY1 = 04/01/05 - 03/31/06;
PY2 = 04/01/06 - 03/31/07; PY3 = 04/01/07 - 03/31/08

Data Abstraction Definitions (PC)

DATA ELEMENTS/ VARIABLE NAME	INSTRUCTIONS (DEFINITION,VALID VALUES)	SYNONYMS	EXCLUSIONS
Breast Cancer Screening **[PCMAMMOGRAM]** **[PCMAMMOGRAMDATE]** **[PCMAMMOGRAMNO]**	Instruction: Determine if a mammogram was performed during the measurement year or year prior to the measurement year. **Yes (1):** Select this option if mammogram was performed during the measurement year or year prior to the measurement year. ▪ *Record the date the mammogram was performed in mm/dd/yyyy format.* **No (0):** Select this option if mammogram was not performed during the measurement year or year prior. ▪ **Not current due to medical reasons (1):** Select this option if a mammogram was not performed due to medical reasons. ▪ **Not current due to patient reasons (2):** Select this option if a mammogram was not performed due to patient reasons. ▪ **Not current-no reason documented (3):** Select this option if there is no reason documented for not performing a mammogram.	Breast imaging, breast x-ray, breast cancer screening, diagnostic mammography, digital mammography, mammogram, screening mammography	None
Colorectal Cancer Screening **[PCFOBTPERFORM]** **[PCFOBTPERFORMNO]**	Instruction: Determine if colorectal cancer screening is current during the measurement period. **Yes (1):** Select this option if colorectal cancer screening is current. *Note: Current colorectal cancer screening is defined as performing any of the following:* ▪ Fecal occult blood test (FOBT) during the measurement period ▪ Flexible sigmoidoscopy during the measurement period or the four years prior ▪ Double-contrast barium enema (DCBE) during the measurement period or the four years prior ▪ Colonoscopy during the measurement period or the nine years prior **No (0):** Select this option if colorectal cancer screening is not current. ▪ **Not current due to medical reasons (1):** Select this option if the screening is not current due to medical reasons. ▪ **Not current due to patient reasons (2):** Select this option if the screening is not current due to patient reasons. ▪ **Not current-no reason documented (3):** Select this option if there is no reason documented for screening not being current.	**Colorectal cancer screening:** documentation colorectal screening is "up to date" or "current" **FOBT:** ColoCARE, Coloscreen, EZ Detect, Fecal occult blood test, flushable reagent pads, flushable reagent stool blood test, guiac smear test, Hemoccult, Seracult, stool occult blood test **Medical reasons for not screening may include:** total colectomy, terminal illness, other reason documented by practitioner for not performing colorectal cancer screening	None

TABLE 1

Aspirin and Aspirin-Containing Medications

Acetylsalicylic Acid	Aspirbuf	Buffered ASA	Excedrin Geltab
Acuprin 81	Aspircaf	Buffered Aspirin	Excedrin Migraine
Alka-Seltzer	Aspirtab	Buffered Baby ASA	Extra Strength Bayer
Alka-Seltzer Morning Relief	Aspirin Baby	Bufferin	Fiorinal
Anacin	Aspirin Bayer	Bufferin Arthritis Strength	Fiormor
Arthritis Foundation Aspirin	Aspirin Bayer Children's	Bufferin Extra Strength	Fiortal
Arthritis Pain Ascriptin	Aspirin Buffered	Buffex	Fortabs
Arthritis Pain Formula	Aspirin Child	Cama Arthritis-Reliever	Genacote
ASA	Aspirin Child Chewable	Child's Aspirin	Genprin
ASA Baby	Aspirin Children's	Coated Aspirin	Halfprin
ASA Baby Chewable	Aspirin EC	Cosprin	Litecoat Aspirin
ASA Baby Coated	Aspirin Enteric Coated	CTD Aspirin	Low Dose ASA
ASA Bayer	Aspirin Litecoat	Dasprin	Magnaprin
ASA Bayer Children's	Aspirin Lo-Dose	Doans Pills	Med Aspirin
ASA Buffered	Aspirin Low Strength	Easprin	Norwich Aspirin
ASA Children's	Aspirin Tri-Buffered	EC ASA	Pain Relief (Effervescent)
ASA EC	Aspirin, Extended Release	Ecotrin	Pain Relief with Aspirin
ASA Enteric Coated	Aspirin/Butalbital/ Caffeine	Ecotrin Low Strength Adult	Sloprin
ASA/Maalox	Aspirin-Caffeine	Effervescent Pain & Antacid	St. Joseph Aspirin
Ascriptin	Aspirin-pravastatin	Empirin	Stanback Analgesic
Aspergum	Bayer Aspirin	Encaprin	Therapy Bayer
Aspir-10	Bayer Aspirin PM Extra Strength	Entab	Tri Buffered Aspirin
Aspir-Low	Bayer Children's	Entaprin	Uni-As
Aspir-Lox	Bayer EC	Entercote	Uni-Buff
Aspir-Mox	Bayer Enteric Coated	Enteric Coated Aspirin	Uni-Tren
Aspir-Trin	Bayer Low Strength	Enteric Coated Baby Aspirin	Zorprin
	Bayer Plus	Excedrin	

TABLE 2

Lipid Lowering Medications

Abitrate	Ezetimibe	Niacin ER	Pravachol
Advicor	Fenofibrate	Niacin ER Starter Pack	Pravastatin
Altocor	Fluvastatin	Niacin Extended Release	Pravastatin-aspirin
Atorvastatin	Gemcor	Niacin SR	Prevalite
Atromid-S	Gemfibrozil	Niacin TD	Prevalite Powder
B-3-50	Lescol	Niacin TR	Probucol
B3-500-Gr	Lescol XL	Niacor	Questran
Cholestyramine	Lipitor	Niacor B3	Questran Light
Cholestyramine Light	Locholest	Niaspan	Simvastatin
Choloxin	Locholest Light	Niaspan ER	Slo-Niacin
Clofibrate	Lofibra	Niaspan ER Starter Pack	Tricor
Colesevelam	Lopid	Nico-400	Welchol
Colestid	Lorelco	Nicobid Tempules	Zetia
Colestid Flavored	Lovastatin	Nicolar	Zocor
Colestipol	Mevacor	Nicotinex	
Dextrothyroxine Sodium	Niacin	Nicotinic Acid	

TABLE 3

Beta Blocker Medications			
Acebutolol	Corgard	Metoprolol/hydrochlorothiazide	Sotalol HCI
Atenolol	Corzide 40/5	Metoprolol Tartrate/	Tenoretic
Atenolol/chlorthalidone	Corzide 80/5	hydrochlorothiazide	Tenormin
Betapace	Esmolol	Nadolol	Tenormin I.V.
Betapace AF	Inderal	Nadolol/ bendroflumethiazide	Timolide
Betaxolol	Inderal LA	Normodyne	Timolol
Bisoprolol	Inderide	Penbutolol	Timolol Maleate/ hydrochlorothiazide
Bisoprolol/fumarate	Inderide LA	Pindolol	Timolol/ hydrochlorothiazide
Bisoprolol/hydrochlorothiazide	Kerlone	Propranolol	Toprol
Blocadren	Labetalol	Propranolol HCl	Toprol-XL
Brevibloc	Levatol	Propranolol hydrochloride	Trandate
Carteolol	Lopressor	Propranolol/hydrochlorothiazide	Trandate HCl
Cartrol	Lopressor HCT	Sectral	Visken
Carvedilol	Lopressor/hydrochlorothiazide	Sorine	Zebeta
Coreg	Metoprolol	Sotalol	Ziac

TABLE 4

ACEI Medication			
Accupril	Captopril/hydrochlorothiazide	Mavik	Quinapril Hydrochloride/
Accuretic	Enalapril	Moexipril	hydrochlorothiazide
Aceon	Enalapril Maleate/diltiazem	Moexipril Hydrochloride	Quinapril/hydrochlorothiazide
Altace	Enalapril Maleate/hydrochlorothiazide	Moexipril Hydrochloride/	Ramipril
Benazepril	Enalapril/diltiazem	hydrochlorothiazide	Tarka
Benazepril Hydrochloride	Enalapril/felodipine	Moexipril/hydrochlorothiazide	Teczem
Benazepril/amlodipine	Enalapril/hydrochlorothiazide	Monopril	Trandolapril
Benazepril/hydrochlorothiazide	Enalaprilat	Monopril HCT	Trandolapril/verapamil
Capoten	Fosinopril	Monopril HCT 10/12.5	Trandolapril/verapamil hydrochloride
Capozide	Fosinopril Sodium/hydrochlorothiazide	Perindopril	Uniretic
Capozide 25/15	Lexxel	Perindopril erbumine (added 12/10/04)	Univasc
Capozide 25/25	Lisinopril	Prinivil	Vaseretic
Capozide 50/15	Lisinopril/hydrochlorothiazide	Prinzide	Vasotec
Capozide 50/25	Lotensin	Quinapril	Zestoretic
Captopril	Lotensin HCT	Quinapril HCl	Zestril
Captopril HCT	Lotrel	Quinapril HCl/HCT	

TABLE 5

Angiotensin II inhibitors/angiotensin receptor blockers (ARBs)			
Atacand	Cozaar	Irbesartan	Olmesartan/hydrochlorothiazide (added 12/10/04)
Atacand HCT	Diovan	Irbesartan/hydrochlorothiazide	Tasosartan
Avalide	Diovan HCT	Losartan	Telmisartan
Avapro	Eprosartan	Losartan/hydrochlorothiazide	Telmisartan/ hyodrochlorothiazide
Benicar	Eprosartan/ hydrochlorothiazide	Micardis	Teveten
Candesartan	Hydrochlorothiazideolmesartan	Micardis HCT	Teveten HCT
Candesartan/ hydrochlorothiazde	Hyzaar	Olmesartan	Valsartan
			Valsartan/hydrochlorothiazide
			Verdia (added 12/10/04)

TABLE 6

Insulin preparations			
Regular insulin	Ultralente	Novolin	Velosulin
NPH Lente	Multiple daily injections	Penfill	Humalog
Lispro	Continuous subcutaneous	Insulin pump	Novo
Humulin	infusion of insulin	Insulin pen	Nordisk
70/30	Lantus	Iletin	Novolog
Novolin	Semilente	Ultralente	

TABLE 8

Coumadin/Warfarin			
Anisindione	Miradon		
Barr Warfain Sodium	Panwarfin		
Coumadin	Warfarin		
Dicumarl	Warfarin Sodium		
Liquamar	Warfarin Sodium Tablets		

TABLE 9

Clopidogrel			
Clopidogrel			
Clopidogrel Bisulfate			
Plavix			

TABLE 15

Heparin			
Heparin sodium	Dalteparin sodium		
Enoxaparin Sodium			

TABLE 18

Ticlopidine/Dipyridamole

Aggrenox	Persantine	Ticlopidine	
Dipyridamole	Ticlid	Ticlopidine Hydrochloride	

Appendix A: Inclusions Sample Selection CAD

Brief Description	A.1 (ICD-9-CM)	A.2 (CPT)
CAD	414.00-414.07, 414.8, 414.9	
MI	410.00-410.92, 412	
Angina	411.0-411.89, 413.0-413.9	
Percutaneous Coronary Intervention (PCI)	V45.81, V45.82	33140, 92980-92982, 92984, 92995, 92996
CABG		33510-33514, 33516-33519, 33521-33523, 33533-33536

Appendix B: Exclusions CAD 1

Brief Description	B.1 (ICD-9-CM)
Adverse events with therapeutic use of aspirin	995.0 and E935.3, 995.1 and E935.3, 995.2 and E935.3
Adverse events with therapeutic use of other antiplatelets	995.0 and E934.8, 995.1 and E934.8, 995.2 and E934.8

Appendix D: Inclusions CAD 3

Brief description	D.1 (ICD-9-CM)
Myocardial infarction	410.00-410.92, 412

Appendix E: Exclusions CAD 3, HF 6

Brief description	E.1 (ICD-9-CM)
Hx of Asthma	493.xx
Hypotension	458.xx`
2nd and 3rd Degree Heart Block	426.0, 426.12 without V45.01, 426.13 without V45.01
Sinus Bradycardia	427.81, 427.89

Appendix F: Inclusions CAD 7

Brief description	F.1 (ICD-CM)	F.2 (CPT)
Spect scans, MUGA, echocardiography, left ventricular angiography		78414, 78468, 78472, 78473, 78480, 78481, 78483, 78494, 93303, 93304, 93307, 93308, 93312, 93314, 93315, 93317, 93350, 93543, 93555
Diabetes	250.xx, 357.2, 362.01, 362.02, 366.41, 648.0x	

Appendix G: Exclusions CAD 7, HF 7

Brief description	**G.l (ICD-9-CM)**
Brief description	**G.l (ICD-9-CM)**
Allergy/intolerance	
Bilateral renal stenosis	440.1
Chronic renal dialysis	V56.0, V56.8, 39.95, 54.98
Severe renal dysfunction	788.5
Renal failure unspecified	586
Hypertensive renal disease with renal failure	403.01, 403.11, 403.91
Hypertensive heart and renal disease with heart and renal failure	404.02, 404.03, 404.12, 404.13, 404.92, 404.93
Acute renal failure	584.X
Chronic renal failure	585
Patients on ARBs	Refer to medication table 5 for list of ARBs
Pregnancy	V.22.0-V23.9
Moderate or severe aortic stenosis	395.0, 395.2, 396.0, 396.2, 396.8, 425.1, 747.22
Angioadema	277.6

Appendix H: Sample selection HF

Brief Description	H.1 (ICD-9-CM)
Rheumatic HF	398.91
Hypertensive HF	402.01, 402.11, 402.91, 404.01, 404.03, 404.11, 404.13, 404.91, 404.93
Heart failure	428.0, 428.1, 428.20-428.23, 428.30-428.33, 428.40-428.43, 428.9
Status post heart transplant patients are excluded from all HF measures	V42.1

Appendix I: Inclusions HF 1, HF 6, HF 7

Brief Description	I.1 (CPT)
Spect scans, MUGA, 2d echocardiography, left ventricular angiography	78414, 78468, 78472, 78473, 78480, 78481, 78483, 78494, 93303, 93304, 93307, 93308, 93312, 93314, 93315, 93317, 93350, 93543, 93555

Appendix J: Inclusion HF 2

Brief Description	J.1 (CPT)	J.2(CPT)
Inpatient visit codes		99221-99223, 99231-99233, 99234-99236, 99238, 99239, 99251-99255, 99261-99263, 99271-99275, 99281-99285, 99291, 99292
Observation visit codes		99218-99220
Spect scans, MUGA, 2d echocardiography, left ventriculography	78414, 78468, 78472, 78473, 78480, 78481, 78483, 78494, 93303, 93304, 93307, 93308, 93312, 93314, 93315, 93317, 93350, 93543, 93555	

Appendix K: Inclusions HF 3, HF 4, HF 5, HTN 1, HTN 3

Brief Description	K.1 (CPT)
Office or other OP services	99201-99205, 99212-99215, 99241-99245
Prolonged services	99354-99355
Preventative medicine	99385-99387, 99395-99397, 99401-99404

Appendix L: HF 8

Brief description	L.1 (ICD-9-CM)
Atrial fibrillation	427.31

Appendix M: Sample Selection DM

	Brief Description	M.1 (ICD-9-CM)
Diabetes DX	DM	250.00-250.93
Diabetes related DX	polynephropathy	357.2
	diabetic retinopathy	362.01, 362.02
	diabetic cataract	366.41
	DM complicating pregnancy	648.00-648.04

Appendix N: Inclusion DM 1, DM 2, DM 7

Brief Description	N.1 (CPT)	N.2 (LOINC)
Hemoglobin A1c test	83036	
HbA1c Calculated		17855-8
HbA1c by HPLC		17856-6
HbA1c by unknown method		4548-4
HbA1c by Electrophoresis		4549-2

Appendix O: Sample selection HTN

Brief Description	O.1 (ICD-9-CM)
Hypertension	401.0, 401.1, 401.9
Hypertensive heart disease	402.XX
Hypertensive renal disease	403.XX
Hypertensive heart and renal disease	404.XX

Appendix P: Inclusion DM 6

Brief Description	P.1 (ICD-9-CM)	P.2 (CPT)	P.3 (LOINC)
DX for evidence of nephropathy	250.4X, 403.XX, 404.XX, 405.01, 405.11, 405.91, 581.81, 582.9, 583.81, 584-586, 588.X, 588.8X, 753.0, 753.1X, 791.0, V42.0, V45.1, V56.X		
Evidence of treatment for nephropathy		36800, 36810, 36815, 50300, 50340, 50360, 50365, 50370, 50380, 90920, 90921, 90924, 90925, 90935, 90937, 90945, 90947, 90989, 90993, 90997, 90999	
Renal failure unspecified	586		
Hypertensive renal disease with renal failure	403.01, 403.11, 403.91		
Hypertensive heart and renal disease with heart and renal failure	404.02, 404.03, 404.12, 404.13, 404.92, 404.93		
Acute renal failure	584.X		
Chronic renal failure	585		
Microalbuminuria tests		82042, 82043, 82044, 84155, 84156, 84160, 84165 with 81050	
Macroalbuminuria		81000-81003, 81005	
MALB/CR ratio (mg/gm)			34535-5
MALB/CR ratio (mg/mmol)			30000-4
Quant MALB, test strip			11218-5
Quant MALB (mg/dL)			14957-5
MALB/CR ratio, test strip (mg/mmol)			30001-2
24 hr urine, MALB (mg/L)			30003-8
Urinalysis by dipstick			24357-6
MALB/CR rate, random urine (mg/L)			14959-1
24 hr urine MALB/CR rate (mg/L)			14956-7
Protein random urine by dipstick (qual)			20454-5
24 hr urine MALB/CR rate (mg/L)			14958-3
24 hr urine protein by dipstick (qual)			32209-9
Random urine protein by dipstick (quant)			5804-0
Urine protein electrophoresis panel			34539-7
Albumin/Cr test strip (qual)			20621-9
Urine protein electrophoresis			26034-9
24 hr urine protein			21482-5
Random urine protein (quant)			2888-6
12 hour urine protein			12842-1
Percent albumin, urine electrophoresis			13992-3
Albumin/Creatinine ratio, urine (quant)			14585-4
Albumin urine qualitative			1753-3
Albumin urine quantitative			1754-1
Random urine protein (quant)			27298-9
Urine protein (qual)			2887-8
Protein/Creatinine ratio, random urine (quant)			2890-2
Albumin/Creatinine ratio, urine (quant)			32294-1
Protein/Cr ratio, random urine (quant)			34366-5
Albumin urine electrophoresis (quant)			6942-7
Albumin/Creatinine ratio, random urine			9318-7
Albumin/Creatinine ratio, 24 hr urine			13705-9
Albumin, 24 hr urine (quant)			21059-1

Appendix Q: Inclusions DM 7

Brief Description	Q.1 (ICD-9-CM)	Q.2 (CPT)
Codes to identify Eye Exams (These eye exams provided by eye care professionals are a proxy for dilated eye examinations because there is no administrative way to determine that a dilated exam was performed)	14.1-14.5, 14.9, 95.02-95.04, 95.11, 95.12, 95.16	67101, 67105, 67107-67108, 67110, 67112, 67141, 67145, 67208, 67210, 67218, 67227, 67228, 92002, 92004, 92012, 92014, 92018, 92019, 92225, 92226, 92230, 92235, 92240, 92250, 92260, 92287

Appendix R: Retinopathy codes DM 7

Brief Description	R.1 (ICD-9-CM)
Retinopathy codes	362.02, 362.10, 362.11, 362.12, 362.13 plus 440.8, 362.21, 362.29, 363.31, 362.74

Appendix S: Exclusion DM 8

Brief Description	S.1 (ICD-9-CM)
Bilateral amputation foot	896.2, 896.3
Bilateral amputation legs	897.6, 897.7

Appendix T: Contraindications for anticoagulants HF 8

Brief Description	T.1 (ICD-9-CM)
Leukemia	203.00-208.91
anemia due to chronic blood loss	280.0
iron deficiency anemia	280.9
acute post hemorrhagic anemia	285.1
coagulation defects	286.0-286.9
thrombocytopenia	287.3-287.5
subaracnoid hemorrhage	430
intracerebral hemorrhage	431
nontraumatic extradural hemorrhage	432.0
subdural hemorrhage	432.1
unspecified intracranial hemorrhage	432.9
cerebral aneurysm, nonruptured	437.3
hemorrhage	459
Mallory-Weiss syndorme	530.7
gastric ulcer with hemorrhage	531.00-531.01, 531.20-531.21, 531.40-531.41, 531.60-531.61
dvodenal ulcer with hemorrhage	532.00-532.01, 532.20-532.21, 532.40-532.41, 532.60-532.61
peptic ulcer with hemorrhage	533.00-533.01, 533.20-533.21, 533.40-533.41, 533.60-533.61
gastrojejunal ulcer with hemorrhage	534.00-534.01, 534.20-534.21, 534.40-534.41, 534.60-534.61
rectal bleeding	569.3
hepatic failure	570
alcoholic cirrhosis of liver	571.2
cirrhosis of liver without mention of alcohol	571.5
vomitting blood	578.0
melena	578.1
GI bleeding	578.9
hematuria	599.7
hemoptysis	786.3
other anaphylatic shock due to anticoagulants	995.0 and E934.2
angioneurotic edema due to anticoagulants	995.1 and E934.2
unspecified adverse effect of anticoagulants	995.2 and E934.2

Appendix U: Lipid Codes CAD 2, CAD 5, CAD 6, DM 4, DM 5

Brief Description	U.1 (CPT)	U.2 (LOINC)
Lipid panel	80061	24331-1
Calculated LDL in mg/dL		13457-7
Directly measured LDL in mg/dL	83721	18262-6
LDL after Ultracentrifugation in mg/dl	83716	18261-8
Calculated LDL in mmol/L		22748-8
Cholesterol, serum or whole blood, total	82465	
Cholesterol, total, serum/plasma in mg/dL		2093-3
Cholesterol, total, serum/plasma in mmol/L		14647-2
Lipoprotein, direct measurement; high density choleterol (HDL cholesterol)	83718	
HDL Cholesterol, serum/plasma in mg/dL		2085-9
HDL Cholesterol, serum/plasma in mmol/L		14646-4
HDL Cholesterol, serum/plasma after ultracentrifugation		18263-4
Triglycerides	84478	
Triglycerides, serum/plasma in mg/dL		2571-8
Triglycerides, serum/plasma in mmol/L		14927-8
Triglycerides, whole blood in mg/dL		3043-7
Fasting 12 hr Triglycerides in mg/dL		1644-4
Fasting (time not specified) Triglycerides in mg/dL		3048-6
Fasting 12 hr Triglycerides in mmol/L		30524-3

Appendix X: Inclusion DM 9, HF 9

Brief description	X.1 (CPT)	X.2 (HCPCS)	X.3 (ICD-9-CM)
Adult influenza vaccination	90656, 90658, 90659, 90660	G0008	
Need for vaccine			V04.8, V04.81

Appendix Y: Inclusion DM 10, HF 10

Brief description	Y.1 (CPT)	Y.2 (HCPCS)
Adult pneumococcal vaccine	90732	G0009

Appendix Z: Exclusions DM 10, HF 10

Brief description	Z.1 (ICD-9-CM)
Poisoning due to viral vaccine	995.0 and E949.6, 995.1 and E949.6, 995.2 and E949.6

Appendix CC: Exclusions PC 6

Brief description	CC.1 (CPT)
Total colectomy	44210, 44211, 44212, 44150, 44151, 44152, 44153, 44155, 44156, 45121

Appendix DD: Inclusions PC 6

Brief description	DD.1 (CPT)	DD.2 (LOINC)
Sigmoidoscopy	45330, 45331, 45332, 45333, 45334, 45335, 45337, 45338, 45339, 45340, 45341, 45342, 45345	
Barium enema	74270, 74280	
Colonoscopy	44388, 44389, 44390, 44391, 44392, 44393, 44394, 44397, 45355, 45378, 45379, 45380, 45381, 45382, 45383, 45384, 45385, 45386, 45387	
Occult blood	82270, 82274	
Occult blood, immunoassay		29771-3
Occult blood, peroxidase		2335-8
Occult blood, 1st specimen		14563-1
Occult blood, 2nd specimen		14564-9
Occult blood, 3rd specimen		14565-6
Occult blood, 4th specimen		12503-9
Occult blood, 5th specimen		12504-7
Occult blood, 6th specimen		27401-9
Occult blood, 7th specimen		27925-7
Occult blood, 8th specimen		27926-5
Occult blood, quant		27396-1

Appendix EE: Exclusions DM 9, HF 9

Brief description	EE.1 (ICD-9-CM)
Allergy to eggs	693.1, V15.03
Anaphylactic shock due to food	995.68
Poisoning due to influenza vaccine	995.0 and E949.6, 995.1 and E949.6, 995.2 and E949.6

Appendix JJ: Exclusions PC 5

Brief description	JJ.1 (ICD-9-CM)	JJ.2 (CPT)
Bilateral mastectomy surgical codes	85.42, 85.44, 85.46, 85.48	19180.50*, 19200.50*, 19220.50*, 19240.50*
Unilateral codes (need 2 separate occurrences on 2 different dates of service)	85.41, 85.43, 85.45, 85.47	19180, 19200, 19220, 19240
		*.50 modifier codes indicate the procedure was bilateral and performed during the same operative session

Appendix KK: Inclusions PC 5

Brief description	KK.1 (ICD-9-CM)	KK.2 (CPT/HCPCS)	
Breast Cancer Screening Codes	87.36, 87.37, V76.11, V76.12		
Screening Mammography, digital image bilateral		G0202	
Diagnostic Mammography, direct digital image, bilateral		G0204	
Diagnostic Mammography, direct digital image, unilateral		G0206	
Computer-aided detection add-on code for diagnostic mammography. Use w/ 76090 or 76091		G0236	NOTE: G0236 is a retired code , but would still be valid if used until April 1, 2004.
Computer-aided detection add-on for diagnostic mammography, with further physician review. Use w/ 76090 or 76091		76082	
Computer-aided detection add-on code for screening mammography, with further physician review. Use w/ 76092		76083	
Computer-aided detection add-on code for screening mammography. Use w/ 76092		76085	NOTE: 76085 is a retired code , but would still be valid if used until April 1, 2004.
Diagnostic Mammography, unilateral		76090	
Diagnostic Mammography, bilateral		76091	
Screening Mammography, bilateral		76092	

APPENDIX 3

PGP DEMONSTRATION

MEDICARE CLAIMS WAREHOUSE DATABASE SPECIFICATIONS

PGP Demonstration Project
Data Dictionary for Medicare Claims Warehouse Database Specifications

The PGP Demonstration Claims Warehouse Database will contain 8 types of files, with separate files maintained for each year the demonstration is active (including the base year and performance years 1-3). The files will be created from National Claims History files of 6 types: Inpatient, SNF, Outpatient, Home Health, Carrier (Physician/Supplier), and DME. One type of NCH claims will not be included, Hospice claims, since beneficiaries in hospice are not included in the PGP demonstration. The PGP Claims Warehouse will also contain beneficiary-level information from the Medicare's annual Denominator files and the Enrollment Database. The following pages include data dictionaries for each of the 8 file types.

Additional documentation for the fields created by CMS in all 8 files are available on the Research Data Assistance Center (ResDAC) website, at www.resdac.umn.edu/ddvib/dd_via2.asp (for Part A claims fields) and www.resdac.umn.edu/ddvib/dd_vib.asp (for Part B claims fields). On those web pages, click on the field names to access the documentation. Fields created by CMS are all of the fields in this database except those listed as created by RTI.

File 1: Part A header-level file

File Field	Description	Length	Field Type	Precision
UN_CLAIM_ID	Unique Claim Identifier (created by RTI using the variables MQA_RIC and N_CLAIM -- links the Part A claims files)	12	Char	n/a
HICNO	Beneficiary Identifier (created by RTI using the variables CAN and EQ_BIC)	11	Char	n/a
MQA_RIC	Claim Type Code	1	Char	n/a
N_CLAIM	Claim Number (created by RTI, a sequential claim number)	10	Num	n/a
FROM_DT	Claim From Date	8	Char	n/a
THRU_DT	Claim Through Date	8	Char	n/a
FAC_TYPE	Claim Facility Type Code	1	Char	n/a
TYPESRVC	Claim Service Classification Type Code	1	Char	n/a
PDGNS_CD	Claim Principal Diagnosis Code	5	Char	n/a
NOPAY_CD	Claim Medicare Non-payment Reason Code	1	Char	n/a
PMT_AMT	Claim Payment Amount	12	Num	2 decimals
PRPAY_CD	NCH Primary Payer Code	1	Char	n/a
PRSTATE	NCH Provider State Code	2	Char	n/a
STUS_CD	Patient Discharge Status Code	2	Char	n/a
PER_DIEM	Claim Pass Thru Per Diem Amount	12	Num	2 decimals
UTIL_DAY	Claim Utilization Day Count	3	Num	n/a
DRG_CD	Claim Diagnosis Related Group Code	3	Char	n/a
OPSRVTYP	Claim Outpatient Service Type Code	1	Char	n/a
SOURCE	Diagnosis Source Code (created by RTI to rank the reliability of sources of diagnosis data, see Appendix for documentation)	2	Char	n/a
PROVIDER	Provider Number	6	Char	n/a

File 2: Part A revenue codes file, with HCPCS codes

File Field	Description	Length	Field Type	Precision
UN_CLAIM_ID	Unique Claim Identifier (created by RTI using the variables MQA_RIC and N_CLAIM-- links the Part A claims files)	12	Char	n/a
HICNO	Beneficiary Identifier (created by RTI using the variables CAN and EQ_BIC)	11	Char	n/a
REV_CNTR	Revenue Center Code	4	Char	n/a
REV_DT	Revenue Center Date	8	Char	n/a
HCPCS_CD	Revenue Center HCPCS Code	5	Char	n/a

File 3: Part A procedure codes file

File Field	Description	Length	Field Type	Precision
UN_CLAIM_ID	Unique Claim Identifier (created by RTI using the variables MQA_RIC and N_CLAIM -- links the Part A claims files)	12	Char	n/a
HICNO	Beneficiary Identifier (created by RTI using the variables CAN and EQ_BIC)	11	Char	n/a
PRCDR_CD	Claim ICD-9 Procedure Code (Inpatient, SNF, and Outpatient claims only)	4	Char	n/a
PRCDR_DT	Claim Procedure Performed Date (Inpatient, SNF, and Outpatient claims only)	8	Char	n/a

File 4: Part A diagnosis codes file

File Field	Description	Length	Field Type	Precision
UN_CLAIM_ID	Unique Claim Identifier (created by RTI using the variables MQA_RIC and N_CLAIM -- links the Part A claims files)	12	Char	n/a
HICNO	Beneficiary Identifier (created by RTI using the variables CAN and EQ_BIC)	11	Char	n/a
SOURCE	Diagnosis Source Code (created by RTI to rank the reliability of sources of diagnosis data, see Appendix for documentation)	2	Char	n/a
DGNS_CD	Claim Diagnosis ICD-9 code	5	Char	n/a

File 5: Physician/Supplier line item level file

File Field	Description	Length	Field Type	Precision
UN_CLAIM_ID	Unique Claim Identifier (created by RTI using the variables MQA_RIC and N_CLAIM -- links the Part B Physician/Supplier claims files)	12	Char	n/a
HICNO	Beneficiary Identifier (created by RTI using the variables CAN and EQ_BIC)	11	Char	n/a
MQA_RIC	Claim Type Code	1	Char	n/a
N_CLAIM	Claim Number (created by RTI, a sequential claim number)	10	Num	n/a
NLINE	Line Number (created by RTI, a sequential line number)	2	Num	n/a
FROM_DT	Claim From Date	8	Char	n/a
THRU_DT	Claim Through Date	8	Char	n/a
PMT_AMT	Claim Payment Amount	12	Num	2 decimals
PRV_TYPE	Carrier Line Provider Type Code	1	Char	n/a
PRVSTATE	Line NCH Provider State Code	2	Char	n/a
HCFASPCL	Line CMS Provider Specialty Code	2	Char	n/a
TYPESRVC	Line CMS Type Service Code	1	Char	n/a
PLCSRVC	Line Place Of Service Code	2	Char	n/a
EXPNSDT1	Line First Expense Date	8	Char	n/a
EXPNSDT2	Line Last Expense Date	8	Char	n/a
HCPCS_CD	Line HCPCS Code	5	Char	n/a
SOURCE	Line Diag Source Code (created by RTI to rank the reliability of sources of diagnosis data, see Appendix for documentation)	2	Char	n/a
LINEPMT	Line NCH Payment Amount	12	Num	2 decimals
LALOWCHG	Line Allowed Charge Amount	12	Num	2 decimals
PRF_UPIN	Carrier Line Performing UPIN Numb	6	Char	n/a
LRPAYCD	Line Beneficiary Primary Payer Code	1	Char	n/a
LINEDGNS	Line Diagnosis Code	5	Char	n/a
TAX_NUM	Line Provider Tax Number	10	Char	n/a

File 6: Physician/Supplier header diagnosis codes file

File Field	Description	Length	Field Type	Precision
UN_CLAIM_ID	Unique Claim Identifier (created by RTI using the variables MQA_RIC and N_CLAIM -- links the Part B Physician/Supplier claims files)	12	Char	n/a
HICNO	Beneficiary Identifier (created by RTI using the variables CAN and EQ_BIC)	11	Char	n/a
SOURCE	Diagnosis Source Code (created by RTI to rank the reliability of sources of diagnosis data, see Appendix for documentation)	2	Char	n/a
DGNS_CD	Claim Diagnosis ICD-9 Code	5	Char	n/a

File 7: DME line item level file

File Field	Description	Length	Field Type	Precision
UN_CLAIM_ID	Unique Claim Identifier (created by RTI using the variables MQA_RIC and N_CLAIM)	12	Char	n/a
HICNO	Beneficiary Identifier (created by RTI using the variables CAN and EQ_BIC)	11	Char	n/a
MQA_RIC	Claim Type Code	1	Char	n/a
N_CLAIM	Claim Number (created by RTI, a sequential claim number)	10	Num	n/a
FROM_DT	Claim From Date	8	Char	n/a
THRU_DT	Claim Through Date	8	Char	n/a
PMT_AMT	Claim Payment Amount	12	Num	2 decimals
TYPSRVCB	Line CMS Type Service Code	1	Char	n/a
PLCSRVC	Line Place Of Service Code	2	Char	n/a
EXPNSDT1	Line First Expense Date	8	Char	n/a
EXPNSDT2	Line Last Expense Date	8	Char	n/a
HCPCS_CD	Line HCPCS Code	5	Char	n/a
LINEPMT	Line NCH Payment Amount	12	Num	2 decimals
LRPAYCD	Line Beneficiary Primary Payer Code	1	Char	n/a

File 8: Beneficiary Demonstration, Demographic, Eligibility, and Disease Status file

File Field	Description	Length	Field Type	Precision
HICNO	Beneficiary Identifier (created by RTI using the variables CAN and EQ_BIC)	11	Char	n/a
PGP	PGP Beneficiary Assigned To	2	Char	n/a
ABY	Bene Assigned to PGP in Base Year? (Yes/No)	1	Char	n/a
APY1	Bene Assigned to PGP in Performance Year 1? (Yes/No)	1	Char	n/a
APY2	Bene Assigned to PGP in Performance Year 2? (Yes/No)	1	Char	n/a
APY3	Bene Assigned to PGP in Performance Year 3? (Yes/No)	1	Char	n/a
STATE_CD	State of Residence of the Bene	2	Char	n/a
CNTY_CD	County of Residence of the Bene	3	Char	n/a
ZIP_CD	Zip code of Residence of the Bene	9	Num	n/a
DOB	Date of Birth	8	Num	n/a
SEX	Sex	1	Char	n/a
RACE_CD	Race	1	Char	n/a
AGE	Bene Age at the end of the Prior Year	8	Num	n/a
OREC	Original Reason for Entitlement	1	Char	n/a
CREC	Current Reason for Entitlement	1	Char	n/a
PA_TERM	Reason Part A Entitlement was terminated	1	Char	n/a
PB_TERM	Reason Part B Entitlement was terminated	1	Char	n/a
BUY1 - BUY12	Medicaid Entitlement/Buy-In Indicator for 12 months	12	Char	n/a
DEATH	Date of Death	8	Num	n/a
HOSPICE	Month Entered Hospice (from EDB)	8	Num	n/a
HCC1- HCC177	Disease Status for 70 CMS-HCCs	70	Char	n/a

APPENDIX

RTI Source Codes for Medicare Claims Diagnoses

Source Number	Sites of Care/Claim Type		File Type
1	Hospital inpatient – principal diagnoses,		Medpar or Inpatient file
2	Hospital inpatient – secondary diagnoses		Medpar or Inpatient file
3	Hospital outpatient department		Outpatient file
4	Physician		
4a	Physicians, excluding Anesthesiologist, Pathologist		Part B file
4b	Anesthesiologist, pathologist		Part B file
5	Clinically-trained non-physician (e.g., psychologist, therapist, podiatrist)		Part B file
6	Facility types		
6a	Ambulatory surgery center		Part B file
6b	Home health agency		HHA file
6c	Skilled nursing facility		Medpar or Inpatient file
6d	Hospice		Hospice file
7	Diagnostic testing		
7a	Non-laboratory diagnostic testing .	e.g., radiology imaging clinics	Part B file
7b	Clinical laboratory		Part B file
7o	Laboratory diagnosis		Outpatient file
7r	Radiology		Part B file
7s	Radiology		Outpatient file
8	Durable medical equipment/medical supplies		
8a	DME diagnosis from DME Standard Analytic File		DME file
8b	DME diagnosis from Part B file.		Part B file
8o	DME diagnosis from outpatient file		Outpatient file
9	Other/miscellaneous		
9b	Other part B diagnosis		Part B file
9i	Other inpatient diagnosis		Medpar or Inpatient file
9o	Other outpatient diagnosis		Outpatient file

Source: RTI International

APPENDIX 4

PGP DEMONSTRATION
MEDICAL RECORDS ABSTRACTION WAREHOUSE DATABASE SPECIFICATIONS

MEDICAL RECORDS ABSTRACTION DATABASE SPECIFICATIONS

Bold fields denote key fields, *italicized* fields denote foreign keys. All keys and foreign keys are **REQUIRED** when importing data into the database. Date of import should be used to fill in all "Last Updated" fields.

TblPatient – Holds demographic and medical information about each patient.

Fields	Data Type	Size	Default	Description
HICNO	Text	11		Beneficiary Identifier (created by RTI using claims variables CAN and EQ_BIC, pre-populated prior to medical records abstraction by RTI)
PGP	Text	2		Code for the PGP the beneficiary is assigned to, pre-populated prior to medical records abstraction by RTI
EIN	Text	10		Tax ID number of PGP or PGP sub-unit that this record belongs
IsSelected	Boolean		FALSE	Use default
IsComplete	Boolean		FALSE	True if all information is complete
TotalTime	Numeric		0	Total number of seconds spent on this patient
HasCAD	Boolean		FALSE	True if the patient has CAD. If False then CADConfirmed = 0
HasDM	Boolean		FALSE	True if the patient has DM. If False then DMConfirmed = 0
HasHF	Boolean		FALSE	True if the patient has HF. If False then HFConfirmed = 0
HasHTN	Boolean		FALSE	True if the patient has HTN. If False then HTNConfirmed = 0
Comments	Text	250	Null	Comments or Notes
AbstractDate	Date/Time		Null	Date the user started abstracting the patient.
PhysicianID	Text	30	Null	Unique Identifier from Physician Table
ClinicID	Text	30	Null	Unique Identifier from Clinic Table
MRNumber	Text	25	Null	Medical Record Number
PatIDOther	Text	20	Null	SS Number
FirstName	Text	20	Null	Patient First Name
LastName	Text	20	Null	Patient Last Name
Gender	Numeric		Null	Patient Gender 1=Male, 2=Female, 3=Unknown
DateOfBirth	Text	10	Null	Date of Birth of Patient
PCFluShot	Numeric		Null	See Appendix for definitions – 1=Yes, 0=No
PCFluShotNo	Numeric		Null	See Appendix for definitions – 1=Med Reasons, 2=Patient Reasons, 3= Undocumented

Fields	Data Type	Size	Default	Description
PCPneumoShot	Numeric		Null	See Appendix for definitions– 1=Yes, 0=No
PCPneumoShotNo	Numeric		Null	See Appendix for definitions– 1=Med Reasons, 2=Patient Reasons, 3= Undocumented
PCLDLCTest	Numeric		Null	See Appendix for definitions– 1=Yes
PCLDLCTestNo	Numeric		Null	See Appendix for definitions– 1=Med Reasons, 2=Patient Reasons, 3= Undocumented
PCFOBTPerform	Numeric		Null	See Appendix for definitions– 1=Yes
PCFOBTPerformNo	Numeric		Null	See Appendix for definitions– 1=Med Reasons, 2=Patient Reasons, 3= Undocumented
PCMammo	Numeric		Null	See Appendix for definitions– 1=Yes, 0=No
PCMammoNo	Numeric		Null	See Appendix for definitions– 1=Med Reasons, 2=Patient Reasons, 3= Undocumented
CADConfirmed	Numeric		Null	See Appendix for definitions– 1=Yes, 0=No
CADBP	Numeric		Null	See Appendix for definitions– 1=Yes, 0=No
CADBPNo	Numeric		Null	See Appendix for definitions – 1=Patient Reasons, 2= Undocumented
CADAspCloDrug	Numeric		Null	See Appendix for definitions– 1=Yes, 0=No
CADAspCloDrugNo	Numeric		Null	See Appendix for definitions – 1=Medical Reasons, 2=Prescribed Med, 3=Patient Reasons, 4=Undocumented
CADAnticoagDrug	Numeric		Null	See Appendix for definitions– 1=Yes, 0=No
CADLipid	Numeric		Null	See Appendix for definitions– 1=Yes, 0=No
CADLipidNo	Numeric		Null	See Appendix for definitions – 1=Med Reasons, 2=Patient Reasons, 3= Undocumented
CADLDLCDrug	Numeric		Null	See Appendix for definitions– 1=Yes, 0=No
CADLDLCDrugNo	Numeric		Null	See Appendix for definitions – 1=Med Reasons, 2=Patient Reasons, 3= Undocumented
CADMI	Numeric		Null	See Appendix for definitions– 1=Yes, 0=No
CADBBlockDrug	Numeric		Null	See Appendix for definitions– 1=Yes, 0=No
CADBBlockDrugNo	Numeric		Null	See Appendix for definitions– 1=Med Reasons, 2=Patient Reasons, 3= Undocumented
CADDiabetes	Numeric		Null	See Appendix for definitions– 1=Yes, 0=No
CADLVSD	Numeric		Null	See Appendix for definitions– 1=Yes, 0=No
CADACEIDrug	Numeric		Null	See Appendix for definitions– 1=Yes, 0=No
CADACEIDrugNo	Numeric		Null	See Appendix for definitions– 1=Med Reasons, 2=Patient Reasons, 3= Undocumented
CADARBDrug	Numeric		Null	See Appendix for definitions– 1=Yes, 0=No
DMConfirmed	Numeric		Null	See Appendix for definitions– 1=Yes, 0=No
DMControl	Numeric		Null	See Appendix for definitions– 1=None/Undocumented, 2=Diet, 3=Oral Agents, 4=Insulin
DMHbA1cTest	Numeric		Null	See Appendix for definitions– 1=Yes, 0=No
DMHbA1cTestNo	Numeric		Null	See Appendix for definitions – 1=Patient Reasons, 2=Undocumented

Fields	Data Type	Size	Default	Description
DMBPMeasure	Numeric		Null	See Appendix for definitions– 1=Yes, 0=No
DMMicalbTest	Numeric		Null	See Appendix for definitions– 1=Yes, 0=No
DMMicalbTestNo	Numeric		Null	See Appendix for definitions– 1=Patient Reasons, 2=Undocumented
DMNephropathy	Numeric		Null	See Appendix for definitions– 1=Yes, 0=No
DMEyeExam	Numeric		Null	See Appendix for definitions– 1=Yes, 0=No
DMEyeExamNo	Numeric		Null	See Appendix for definitions – 1=Low Risk, 2=Med Reasons, 3=Patient Reasons, 4=Undocumented
DMEyeRefer	Numeric		Null	See Appendix for definitions– 1=Yes, 0=No
DMFootExam	Text	3		Stored as 3-character string: Position 1=visual inspection, Position 2=Sensory, Position 3=Pulse exam:In each position values are: 1=Yes, 0=No (i.e. 101 = yes visual, no sensory, yes pulse)
DMFootExamNo	Numeric		Null	See Appendix for definitions– 1=Yes, 0=No
HFConfirmed	Numeric		Null	See Appendix for definitions– 1=Yes, 0=No
HFLVFAssess	Numeric		Null	See Appendix for definitions– 1=Yes, 0=No
HFLVFAssessNo	Numeric		Null	See Appendix for definitions– 1=Patient Reasons, 2=Undocumented
HFLVFYear	Numeric		Null	See Appendix for definitions– 1=Yes, 0=No
HFLVFYearNo	Numeric		Null	See Appendix for definitions– 1=Med Reasons, 2=Patient Reasons, 3= Undocumented
HFLVFResult	Numeric		Null	See Appendix for definitions– 1=Yes, 0=No
HFLVSD	Numeric		Null	See Appendix for definitions– 1=Yes, 0=No
HFHospital	Numeric		Null	See Appendix for definitions– 1=Yes, 0=No
HFBBlockDrug	Numeric		Null	See Appendix for definitions– 1=Yes, 0=No
HFBBlockDrugNo	Numeric		Null	See Appendix for definitions– 1=Med Reasons, 2=Patient Reasons, 3= Undocumented
HFACEIDrug	Numeric		Null	See Appendix for definitions– 1=Yes, 0=No
HFACEIDrugNo	Numeric		Null	See Appendix for definitions– 1=Med Reasons, 2=Patient Reasons, 3= Undocumented
HFARBDrug	Numeric		Null	See Appendix for definitions– 1=Yes, 0=No
HFAFib	Numeric		Null	See Appendix for definitions– 1=Yes, 0=No
HFWarfDrug	Numeric		Null	See Appendix for definitions– 1=Yes, 0=No
HFWarfDrugNo	Numeric		Null	See Appendix for definitions– 1=Med Reasons, 2=Patient Reasons, 3= Undocumented
HTNConfirmed	Numeric		Null	See Appendix for definitions– 1=Yes, 0=No
LastUpdate	Date		1/1/1800	Stores the date and time a record was last updated

TblClinic – Holds demographic information about the clinic.

Fields	Data Type	Size	Default Value	Description
ClinicID	Text	30		Unique ID for each record
ClinicNumber	Text	20		Clinic Number/Billing Number
ClinicName	Text	100		Clinic Name
Address1	Text	50		Address of Clinic
Address2	Text	50		Second address of Clinic
City	Text	50		City Clinic Located
County	Text	50		County Clinic Located
State	Text	2		State Clinic Located
Zip1	Text	5		First 5 Digits of Zip Clinic Located
Zip2	Text	4		Last 4 Digits of Zip Clinic Located
IsSelected	Boolean		FALSE	Use default
LastUpdate	Date/Time		1/1/1800	Updated every time a record is saved.

TblPhysician – Holds information about each physician within the clinic.

Fields	Data Type	Size	Default Value	Description
PhysicianID	Text	30		Unique ID for each record
LastName	Text	30		Physicians Last Name
FirstName	Text	30		Physicians First Name
ProviderNumber	Text	15		UPIN or its alternate
IsSelected	Boolean		FALSE	Use default
LastUpdate	Date		1/1/1800	Updated every time a record is saved.

TblPhysicanClinicJoin – Join table between the physician and clinic tables.

Fields	Data Type	Size	Default Value	Description
PhysicianID	Text	30		Unique ID for each physician
ClinicID	Text	30		Unique ID for each clinic
LastUpdate	Date		1/1/1800	

TblPCVisit – Holds Preventive Care information about each patient visit.

Fields	Data Type	Size	Description
PCVisitID	Text	30	Unique ID for each record. Automatically created by the collection tool
HICNO	Text	11	Beneficiary ID of patient that this record belongs
PGP	Text	2	Code for the PGP the beneficiary is assigned to
EIN	Text	10	Tax ID number of the PGP or PGP sub-unit that this record belongs
PCVisitDate	Text	10	Date of patient visit.
PCBPMeasure	Number		See Appendix for definitions– 1=Yes, 0=No
PCBPMeasureNo	Number		See Appendix for definitions– 1=Patient Reasons, 2=Undocumented
PCBPSystolic	Text	4	See Appendix for definitions – Systolic measurement
PCBPDiastolic	Text	4	See Appendix for definitions – Diastolic measurement
HFWeight	Number		See Appendix for definitions– Patient weight in pounds
HFPtEducation	Number		See Appendix for definitions– 1=Yes, 0=No
HTNBPPlanDoc	Number		See Appendix for definitions– 1=Yes, 0=No
LastUpdate	Date		Defaults to 1/1/1800. Updated every time a record is saved.

TblPCLDLC – Holds information about each LDL done.

Fields	Data Type	Size	Default Value	Description
PCLDLCID	Text	30		Unique ID for each record
HICNO	Text	11		Beneficiary ID number of the patient that this record belongs
PGP	Text	2		Code for the PGP the beneficiary is assigned to
EIN	Text	10		Tax ID of PGP or PGP unit that this record belongs
PCLDLCDate	Text	10		See Appendix for definitions – Date of LDL Test
PCLDLCFasting	Number			See Appendix for definitions – 1=Was Fasting, 2=Not Fasting, 3=Unable to Determine
PCLDLCValue	Text	5		See Appendix for definitions – LDL value
LastUpdate	Date/Time		1/1/1800	Updated every time a record is saved.

TblDMHbA1c – Hold information about each HbA1c test done.

Fields	Data Type	Size	Default Value	Description
DMHbA1cID	Text	30		Unique ID for each record
HICNO	Text	11		Beneficiary ID number of the patient that this record belongs
PGP	Text	2		Code for the PGP the beneficiary is assigned to
EIN	Text	10		Tax ID of PGP or PGP unit that this record belongs
DMHbA1cDate	Text	10		See Appendix for definitions – Date of HbA1c Test
DMHbA1cValue	Text	5		See Appendix for definitions – HbA1c value
LastUpdate	Date/Time		1/1/1800	Updated every time a record is saved.

APPENDIX 5
QNET ADMINISTRATOR REGISTRATION FORM AND INSTRUCTIONS

QualityNet Exchange Administrator Registration Form and Instructions

The QualityNet Exchange (QNet Exchange) Registration Form is used for you to request access to the secure QualityNet Exchange website as the QNet Exchange Administrator for your organization.

NOTE: Please refrain from making any changes or modifications to these forms, as this can delay the registration process. If you feel you have a business need to modify the registration forms, please contact the QualityNet Help Desk.

It is highly recommended that each organization designate **two** people as **QualityNet Exchange Administrators** for the organization—one to serve as the primary QualityNet Exchange Administrator and the other, to act as a backup administrator.

Note: For QIOs, the designated Security Administrator (QIOSA) and their backup person are the QNet Exchange Administrators for the QIO. A single state QIO may authorize two QIOSAs. The rules are slightly different for multi-state QIOs, depending on how administrators are assigned to QualityNet Exchange groups. Multi-state QIOs have a top-level group along with sub-groups for each of the individual states. If a QIOSA is assigned to the top-level group, that individual then has the ability to manage users at any of the sub-groups and is counted as one of the two allowed QIOSAs for each of the state sub-groups.

To register as the QualityNet Exchange Administrator for your organization, complete the following steps:

1. **Print** your information **legibly** and **completely** in each of the applicable fields on the QualityNet Exchange Administrator Registration Form.

2. As the person applying to be the QualityNet Exchange Administrator, you must sign and date the form in the presence of a Notary Public, obtaining the Notary's signature and seal on the form.

   NOTE: If you do not have a Notary on staff, most banks and libraries have a Notary available. Some states allow Notaries to charge a fee. If someone at your organization is interested in becoming a Notary, you may contact your Secretary of State for additional information. Some states do not require a notary seal or stamp. However, QualityNet Exchange requires the notary seal or stamp on the registration form for approval.

3. The highest-level **executive** at your location must **complete** and **sign** the QualityNet Exchange **Administrator Authorization form**, attached to the Quality Net Exchange Administrator Registration Form and Instructions.

4a. If you are a Vendor or a Health Care System, **mail** the original completed QualityNet Exchange **Administrator Registration Form** and the QualityNet

Exchange **Administrator Authorization form** to the QNet Help Desk. The address follows.

4b. If you are *not* a Vendor or a Health Care System, **mail** the original completed QualityNet Exchange **Registration Form** and the QualityNet Exchange **Administrator Authorization form** to your QIO or ESRD Network, keeping a copy at your office.

The QIO or ESRD Network QualityNet Exchange Administrator will mail the original form to the QualityNet Help Desk, keeping a copy at their office. The QIO or ESRD Network QualityNet Exchange Administrator will also enter your registration information online (in the secured area of QualityNet Exchange).

QualityNet Help Desk
6000 Westown Parkway, Suite 350E
West Des Moines, IA 50266

5. The QualityNet Help Desk will process the registration form. You will be notified by **e-mail** that the **registration** process is **complete** and that the **QualityNet Exchange** website is now **accessible**. The e-mail will also contain your Log-In ID. If your QualityNet Exchange Administrator has not notified you of your initial password, click on the **Forgot Your Password?** link on the Log-In screen of the QualityNet Exchange website at http://www.qnetexchange.org/. A temporary password will be e-mailed to you.

6. Follow instructions found on the Resources/Getting Started/System Set-up section of the QualityNet Exchange website at http://www.qnetexchange.org/. All QualityNet Exchange users need to run the Test Your System feature to test the compatibility of their computer with the QualityNet Exchange site. The test will insure that the user has the required Java Runtime Environment and associated policy files to utilize the system.

7. If you have any questions regarding this process, contact the QualityNet Help Desk at (866) 288-8912 or send an e-mail message to Qnetsupport@ifmc.sdps.org

QualityNet Exchange Administrator Responsibilities

- Create, approve, edit, and/or terminate QualityNet Exchange user accounts within your organization.
- Monitor QualityNet Exchange usage at your organization to maintain proper security and confidentiality measures.
- Serve as the point of contact at your organization for information regarding QualityNet Exchange.

QualityNet Exchange Administrator Registration Form Field Descriptions

Access Request

Request Date	**REQUIRED**. The date the QualityNet Exchange Administrator Registration Form is filled out.
First Name	**REQUIRED.** The first name of the person for which the QNet Exchange access request is requested (from this point on, referred to as the user).
Middle Initial	The first initial of the middle name of the user.
Last Name	**REQUIRED.** The last name of the user.
Business E-mail Address	**REQUIRED.** The user's e-mail address at his/her organization.
Job Title	**REQUIRED.** The job title of the user.
Employer Name	**REQUIRED.** The name of the organization where the user will access QNet Exchange. Specify Health Care System (HCS) name if applying to be a QNet Administrator for the HCS.
Medicare Provider Number (If applicable)	The Medicare provider number of the organization where the user will access QNet Exchange.
Joint Commission ID Number (If applicable)	The Joint Commission ID number of the organization where the user will access QNet Exchange. (If you are not a JCAHO Performance Measurement System and your data collection tool meets the CMS 7th SOW measurement specifications, your organization will be assigned an organization ID number.)
Setting	**REQUIRED.** The type of organization for which you are applying to be the QualityNet Exchange Administrator.
Employer Address	**REQUIRED.** The address of the organization where the user will access QNet Exchange.
Work Phone Number	**REQUIRED.** The work telephone number of the user.

Extension Number	The work telephone extension number, if applicable, of the user.
Fax Number	The fax number of the organization where the user will access QNet Exchange.
Security Question	**REQUIRED.** A question that is easily answered by the user but that would be difficult for others to answer. Write the correct answer next to one of the question choices: City of birth, Pet's name, or Mother's maiden name. This question is used for security and password validation purposes
Answer	**REQUIRED.** The answer to the user's security question.

*Signatures Required (**REQUIRED** for approval)*

Applicant	**REQUIRED.** The signature of the user. The user must sign in the presence of a Notary.
Date	**REQUIRED.** The date the QualityNet Exchange Administrator Registration Form is signed by the user.
ID Verified by Notary	**REQUIRED.** The type of ID the Notary used to verify the applicants identity.
Notary Public	**REQUIRED.** The signature of the Notary Public who notarizes the form. Note: Some states do not require a notary seal or stamp. However, the QualityNet Exchange registration form does require a notary seal or stamp for approval.
Notary Expiration Date	The commission expiration date of the notary.
Notarized Date	**REQUIRED.** The date the Notary Public signs the form.

QualityNet Exchange Administrator Registration Form

*NOTE: All fields marked with an asterisk are required and must be completed to obtain approval.

Access Request

*Request Date:	*First Name:	Middle Initial:	*Last Name:

*Business E-Mail Address:

*Job Title:

*Employer Name or Health Care System Name:

Medicare Provider Number: (If applicable):	Joint Commission ID Number: (If applicable):

*Specify Setting: QIO Health Care System Hospital Vendor Physician Office ESRD Network ESRD Facility Home Health Agency Nursing Home State Agency CMS Other (Specify):

*Employer Address:				
	Street	City	State	ZIP

*Work Phone: ( )	Extension:	Fax: ( )

*Security Question (answer only one): City of birth_____ Pet's name _____ Mother's maiden name _____

Signatures Required

*Applicant:	*Date:

*As The Assigned Notary Public I have used the following **ID** as verification
Driver's License Passport Other: _____

*Notary Public (include seal or stamp): Notary Expiration Date:	*Notarized Date:

QualityNet Exchange Administrator Authorization

I _____ authorize _____
(Name of Executive) (Name of QualityNet Administrator)

to be the QualityNet Exchange Administrator for _____
(Name of Organization)

I understand that he/she will be responsible for the following:

- Creating, approving, editing, and/or terminating QualityNet Exchange user accounts within this organization
- Monitoring QualityNet Exchange usage at this organization to maintain proper security and confidentiality measures
- Serving as the point of contact at this organization for information regarding QualityNet Exchange

I understand that, as a security measure, I may be contacted on a future date by the QualityNet Help Desk to verify my position and whom I have authorized to be QualityNet Exchange Administrator(s). I may also be asked to verify those individuals that have been given access to QualityNet Exchange.

_____
(Signature)

_____
(Title)

_____
(Date)

APPENDIX 6
PGP QUESTIONS AND ANSWERS MATRIX FROM VERSION 1 QUALITY MEASURES SPECIFICATIONS DOCUMENT

	From	PGP Site	Date Rec'ed	Question	Date Answ'ed	Answer	By Whom
1	Ward, Kathleen	U of Michigan	5/13/2005	There appears to be conflicting definitions of "confirmed with disease". In the data abstraction definition sections, it asks for documentation of the presence of heart failure in the medical record. In the analytic flowcharts, HF confirmed is defined as two office visits with a confirmed diagnosis of disease. If the correct definition is the two dx of disease, then they would have met this criteria to even be included in the condition module. If it is also required to be confirmed in the medical record, then this would require a difficult text string search or going directly into the record. If both these steps are required, then they need to be named differently in the specs.	6/13/2005	The specifications were initially intended for retrospective medical record data collection. Therefore, IFMC implemented a dual confirmation of the chronic disease diagnosis they represented in the data. This was done to remove patients that did not have the chronic disease and thus would not be expected to be assessed and/or treated as if they did. Initially, RTI will identify the sample using available claims data. For those chosen to be audited (also selected by RTI), IFMC will require documentation the patient has the respective chronic disease (DM, CAD, HF, or HTN). IFMC will accept any documentation in support of the chronic disease that the primary care provider would have had access to at the point of care.	IFMC
2	Ward, Kathleen	U of Michigan	5/13/2005	Once we receive the ID's for the 30 beneficiaries per disease for whom to submit documentation, how long does a PGP have to turn the information around back to IFMC? This is not in the timeline. For example in the base year, we'll find out the IDs 12/1 and the audit is completed 2/1, so when would the documentation have to be submitted?	6/20/2005	The PGPs will have 4 weeks to turn the information around and submit it to IFMC. The complete timetable is in section 6 of the measure specifications report.	RTI
3	Ward, Kathleen	U of Michigan	5/13/2005	P. 24 of document says that denied claims and line items will be removed from the data for quality measurement purposes. The HEDIS process uses denied claims. Just because Medicare didn't pay for the service doesn't mean the service didn't occur.	6/20/2005	We exclude some denied claims and retain others, using a method developed with CMS staff for projects that analyze diagnosis and procedure code data.	RTI

	From	PGP Site	Date Rec'ed	Question	Date Answ'ed	Answer	By Whom
4	Ward, Kathleen	U of Michigan	5/13/2005	For the blood pressure and weight measures which are looking for occurrence at every office visit, who will identify which visits qualify for evaluation, RTI or the PGPs? If RTI, then we would expect to get the office visits that will be reviewed to be pre-populated in the abstraction tool.	6/20/2005	RTI will identify the visits and will supply them to the PGPs. For the three measures that require an activity to be conducted at each visit (HTN-1, HF-3, and HF-4) the following process will be undertaken by RTI: Part B carrier claims will be used to identify visits with the appropriate CPT codes (from Appendix K). The visits will then be restricted to those provided by primary care providers as defined in CMS provider specialty codes [family practice (08), general practice (01), internal medicine (11), geriatric medicine (38), physicians assistants (97), and nurse practitioners (50)]. The visits will then also be restricted to those with the PGP's EIN code so that only those visits that the PGP has direct access to and influence over are counted in the denominator.	RTI
5	Ward, Kathleen	U of Michigan	5/13/2005	As a follow up number 4, the CPTs that define office visits in the technical specs also identify visits with providers such as dermatology and ophthalmology. We don't think these types of specialties should be included in the office visits reviewed.	6/13/05	You are correct; they should not. RTI will identify from claims the visits to primary care physicians [family practice (08), general practice (01), internal medicine (11), geriatric medicine (38), physicians assistants (97), and nurse practitioners (50)]. The number of times an element will be collected for every visit has been decreased to the blood pressure (HTN-1 and HF-4) and weight measurement (HF-3). Please refer also to the answer to #4.	RTI

	From	PGP Site	Date Rec'ed	Question	Date Answ'ed	Answer	By Whom
6	Ward, Kathleen	U of Michigan	5/13/2005	I'm not sure what the other PGPs are experiencing, but we have to go through a fairly complicated process to match the beneficiary HICNOs to our internal patient identifier. I asked about this earlier, but I'd like to go on record once again to request beneficiary SSN or name to help us in the matching process.	6/20/2005	The first 9 digits of the HICNO include the SSN for most beneficiaries. This is the variable CAN in the Medicare National Claims History data dictionary. The 11-digit HICNO includes the 9-digit CAN and the 2-digit EQ_BIC variable.	RTI
7	Ward, Kathleen	U of Michigan	5/13/2005	The general exclusions for a disease module should allow for the removal of expired patients that PGPs can document in their internal systems, but not yet reflected in Medicare beneficiary information.	6/20/2005	Two steps in the sampling process should decrease the likelihood of this occurring.- eligible patients are only those that have full year Part A and Part B coverage- submitted claims indicate two visits occurred within the measurement periodIf a deceased patient was not excluded from the sample and it was known by the provider the patient was seriously ill and near death, documentation of such is a 'medical reason' for not performing a test, e.g., a denominator exclusion. If not, and their demise was unexpected at that point in time, the provider(s) had two opportunities to assess or treat the patient in a manner consistent with the quality measure.	CMS
8	Ward, Kathleen	U of Michigan	5/13/2005	Will there be any kind of review / approval of PGP electronic medical record / non-claims administrative data sources that will be used for "topping-up" or medical record/hybrid measures?	6/13/2005	No, we will not be auditing the PGPs' data systems. Print screens or other hardcopy reports/information from the record will need to be sent to IFMC to confirm the information. Any information that would have been available to the provider at the point of care may be used. The information will need to be highlighted in some way as to facilitate the audit process.	IFMC

	From	PGP Site	Date Rec'ed	Question	Date Answ'ed	Answer	By Whom
9	Johnson, Sheila	Hitchcock	5/26/2005	Color-code the required fields in the tool so they are easily visible	6/13/2005	All fields, except those disabled electronically, will need to be answered.	IFMC
10	Johnson, Sheila	Hitchcock	5/26/2005	Place a missing info screen prior to the summary field, so corrections can easily be made.	6/13/2005	We will do this. Thank you for the suggestion.	IFMC
11	Elliott, Dianne	Deaconness Billings Clinic	5/27/2005	What Circumstances would lead us to add to the patient lists?	6/13/2005	This function is unnecessary for the PGP demonstration.	IFMC
12	Ward, Kathleen	U of Michigan	5/27/2005	We hit on this question in an earlier submission, but want to tackle it from a different angle. There are two different methods written about in the documentation to confirm presence of a disease. In the data abstraction definition sections, it asks for documentation of the presence of heart failure in the medical record. In the analytic flowcharts, HF confirmed is defined as two office visits with a confirmed diagnosis of disease. For some of the measures, we might be able to pull all the required data elements from the electronic medical record. But the way disease confirmed is defined in the chart abstraction instructions, it sounds like we would have to do a manual look-up. For measures where we can do total electronic abstraction, we want to avoid having to do this.	6/13/2005	See answer to #1. The PGPs are asked to validate the chronic disease for which they were selected using any information that would have been available to the provider at the point of care.	IFMC

	From	PGP Site	Date Rec'ed	Question	Date Answ'ed	Answer	By Whom
13	Ward, Kathleen	U of Michigan	5/27/2005	In the analytic flow chart sections, "disease-confirmed" is defined as 2 face to face office visits with appropriate diagnoses. Yet the claims to be used according the specifications are inpatient, outpatient and Part B Physician Supplier. Along these same lines, I faxed Sherry Grund some questions yesterday as to confirming which types of claims qualify for the quality measures. I faxed her the RTI table which has the field SOURCE which shows from what file different records come from. I asked if their definition of what records to use to define the sample could correspond to how RTI defines claims. It would be good to get feedback on this ASAP, as database development is currently underway on this end * this information is vital.	6/20/2005	Claims to be used to identify beneficiaries with particular chronic diseases will include inpatient, outpatient, and Part B carrier (physician/supplier) claims with SOURCE codes 1-5, since they are all viewed as high quality claims types for identifying diagnoses. We expect that information from all of these claims types would be noted in outpatient medical records that are the focus of the DOQ specifications.	RTI
14	Ward, Kathleen	U of Michigan	5/27/2005	For the CAD sample definition, if someone has had the PCI or CABG procedures, would they still need 2 claims to get into the sample?	6/13/2005	Yes, they will still need two claims to be eligible for sampling.	IFMC
15	Ward, Kathleen	U of Michigan	5/27/2005	From what we understand from the documentation, samples of 411 for each quality measure will be drawn from the initial sample of 615. Will the chart abstraction software be set to "turn-on" only those sections of a chart abstraction screen for which a person fell into that sample? Or will we be collecting all data elements on all 615?	6/13/2005	Yes, the tool will only enable those elements that are necessary for that patient.	IFMC

	From	PGP Site	Date Rec'ed	Question	Date Answ'ed	Answer	By Whom
16	Ward, Kathleen	U of Michigan	5/27/2005	Why does the chart abstraction training have to occur in July for abstraction occurring in October? It is very unlikely we will have our abstractor(s) in place at that time.	6/13/2005	We agree and are planning for two WebEx trainings in September. They are tentatively scheduled for 9/22 and 9/27. This will include a half day each on clinical measure training and tool training. They will be scheduled so that a p.m. time for each type of training will be available as will an a.m. time.	IFMC
17	Ward, Kathleen	U of Michigan	5/27/2005	Why is the DM blood pressure measure looking for last BP reading, while the HF and CAD measures are looking for BP at every visit? This puts a great burden on the abstraction process. For example, we took a random sample of 411 HF patients, and they had 2,827 visits that qualify for Weight and BP measurement--that is a lot of visits to go through!	6/20/2005	Refer to answers #4 and #5 for additional clarification. While we understand the burden associated with data collection for large numbers of visits, the specification calls for this information (BP for HTN-1 and HF-4 and Weight for HF-3). RTI will be reduce this burden by populating the tool only with the office visits to primary care providers within your practices.	IFMC

	From	PGP Site	Date Rec'ed	Question	Date Answ'ed	Answer	By Whom
18	Ward, Kathleen	U of Michigan	5/27/2005	Regarding DM eye exams: HEDIS criteria for an eye exam include E&M codes billed by an ophthalmologist or optometrist to count towards the numerator (99203 -05, 99213 - 15, 99242 -99245). UM's HMO (M-CARE) received special approval to use 99203 and 99213 by their NCQA Auditor Ernst and Young based on documentation submitted that verified that UMHS ophthalmologists use these codes to bill for dilated retinal exams. We can provide this documentation if necessary.	6/13/2005	All of the DOQ diabetes measures are part of the National Diabetes Quality Improvement Alliance Performance Measurement Set for Adult Diabetes and not the relatively comparable HEDIS measures. Therefore, they are not specified in exactly the same way. If a PGP does not meet the threshold from claims analysis, RTI will provide a list of the patients that failed the numerator for this measure and chart review can be used to increase the numerator. PGPs have the option of using either hybrid approach.	RTI
19	Ward, Kathleen	U of Michigan	5/27/2005	Please consider the differences in specifications between DOQ and HEDIS for monitoring nephropathy/ proteinuria screening. The DOQ specs only list CPT and ICD-9 dx codes for identifying treatment of nephropathy. HEDIS specs allows ICD-9 procedures, UB92 codes and DRGs to be used to increase treatment for neuropathy hits Table E14-G p.123 of HEDIS 2005 volume 2). HEDIS also allows any visit to a nephrologist to count as evidence of treatment for nephropathy.	6/13/2005	All of the DOQ diabetes measures are part of the National Diabetes Quality Improvement Alliance Performance Measurement Set for Adult Diabetes and not the relatively comparable HEDIS measures. Therefore, they are not specified in exactly the same way. If a PGP does not meet the threshold from claims analysis, RTI will provide a list of the patients that failed the numerator for this measure and chart review can be used to increase the numerator. PGPs have the option of using either hybrid approach.	IFMC
20	Schneider, Katherine	IRMA	5/27/2005	Table 2-1 (and other places): Shouldn't DM1 be titled "A1C measurement" (not management) (parallels lipids).	6/13/2005	We agree; however, the titles of the measures cannot be changed by IFMC at this time.	IFMC

	From	PGP Site	Date Rec'ed	Question	Date Answ'ed	Answer	By Whom
21	Schneider, Katherine	IRMA	5/27/2005	HEDIS Crosswalk: It is worth noting for CAD measures that the denominator populations may not match in that post-MI (or acute event) is a sicker population than "CAD" (may be stable angina etc). This is differentiated for beta blocker but not the other measures.	6/13/05	That is correct. The measures themselves were selected during a technical expert panel meeting early in the DOQ project. The panel consisted of representatives from AHRQ, AMA, CMS, NCI, NCQA, NQF, RAND and several health plans and medical schools. Again, the measures cannot be changed by IFMC at this time.	IFMC
22	Schneider, Katherine	IRMA	5/27/2005	For DM-2 the 75% threshold doesn't make sense … will this be "reversed" to a 25% ceiling rather than a 25% floor?	6/13/2005	The measure definition/specifications will remain the same; however, we will take an additional step and compute this measure in reverse, i.e., 75% or more are below 9.0.	IFMC
23	Schneider, Katherine	IRMA	5/27/2005	DM9: Shouldn't this be the year OF the measurement year (not prior) given that our year spans April – March this should be OK (as opposed to calendar year). This would also help alleviate the vaccine shortage issue of the past season (would suggest applying prior year to the baseline data which is indeed CY).	6/13/2005	IFMC believes this measure was stated in this manner to account for different 12 month periods being used for a measurement year. We plan to use the following measurement years for the PGP Demo for the flu measure:Baseline = September 2003-February 2004PY1 = September 2005-February 2006PY2 = September 2006-February 2007PY2 = September 2007-February 2008	IFMC
24	Schneider, Katherine	IRMA	5/27/2005	Can we use hospital records, e.g. data recorded during ED/inpatient admissions?	6/20/2005	See answer to #13. It is appropriate to use information describing an ED/inpatient admission if the provider has access to this information at the office/clinic (the point of care).	RTI
25	Schneider, Katherine	IRMA	5/27/2005	Can we notate in the tool where the data was located, for audit purposes?	6/20/2005	Yes, you may use the notes/comments fields to record anything you wish to record.	IFMC
26	Schneider, Katherine	IRMA	5/27/2005	Will the baseline year records need to be audited if an improvement goal is used in an implementation year? Clarification of whether 2004 will be baseline for everything, or will	6/13/05	Yes, the baseline records will need to be audited and CY 2004 will always be the baseline data used. A baseline data collection/audit can be requested in the base year	IFMC

	From	PGP Site	Date Rec'ed	Question	Date Answ'ed	Answer	By Whom
				improvement always be based on the prior year.		or any performance year.	
27	Schneider, Katherine	IRMA	5/27/2005	Advocate for submission of 8 records for audit, 30 only if needed. Substantial administrative burden.	6/13/05	IFMC believes it is necessary to submit all of the record documentation for all 30 records. However, if we learn from baseline that this is unnecessary we will revise the process for the remaining submissions.	IFMC
28	Schneider, Katherine	IRMA	5/27/2005	6 weeks for the data collection is not enough… needs to reflect the number of modules/charts.	6/13/2005	RTI is currently revising the timeline to respond to this request. 8 weeks will be allotted; however, some responses will take less time because they involve less records.	RTI
29	Schneider, Katherine	IRMA	5/27/2005	Measures should only be changed if all sites unanimously agree, and may need to be re-weighted. The impact of changes will need to be evaluated on a case by case basis. In general, these measures should be essentially fixed for the duration of the project. It can be acknowledged that they do not necessarily represent ideal/current goals/standards.	6/13/2005	CMS agrees that freezing the measures for the 3-year duration of the PGP demonstration project is acceptable.	CMS
30	Bernstein, Steven	U of Michigan	6/7/2005	There are only 12 DOQ measures, for the other 20 measures Medicare HEDIS data is not available and the threshold target will default to 75% compliance with the measure. The selection of a 75% compliance level is arbitrary and it is unclear whether this is an achievable goal for the target.	06/20/2005	The thresholds were set as part of the PGP Demonstration Quality Consensus Agreement reached at the December meeting in Baltimore, that includes quality performance targets based on both defined thresholds and quality improvement. PGPs have the option of submitting base year site specific data for use in setting a quality improvement target which may be more achievable than a threshold target in certain instances.	RTI

	From	PGP Site	Date Rec'ed	Question	Date Answ'ed	Answer	By Whom
31	Bernstein, Steven	U of Michigan	6/7/2005	When will updated measure documents be available for the Quality of Care Measure, data abstraction definition, analytic flowchart, and appendix documents? Several of the questions below are stated because it seems that documents reviewed may not be updated. i.e. There appear to be data elements in the data abstraction definition, but not a corresponding description in the Quality of Care Measures description for numerator and denominators.	6/13/2005	The measure specifications were not updated until PGP site feedback could be received. Those changes are included with Version 2 of the Quality Measures Specification Report, dated 7/29/05.	IFMC
32	Bernstein, Steven	U of Michigan	6/7/2005	When medical record audits are performed, which records will be reviewed to determine if a measure has been met? i.e. In an integrated Health System, a foot exam may be performed at a diabetic foot clinic, the information will be in a patient registry.	6/13/2005	IFMC will accept documentation from any medical record source or another clinical information that is available at the point of care.	IFMC
33	Bernstein, Steven	U of Michigan	6/7/2005	Most of the measures note denominator exclusions for Medical Reasons and Patient Reasons. The analytic flowchart on several of the measures do not list the specific reasons that would apply. What are the specific valid medical and patient reasons for each measure? Do the same denominator exclusions for HEDIS apply to the PGP Demonstration measures in all cases?	6/13/2005	The DOQ measures were constructed using the template of the measures developed by The Consortium (AMA). The premise being that the specification would mention the more common medical reasons why a therapy or medication was not ordered; however, would leave latitude for the provider to use his or her skills in managing the patient's care. Any reason documented by the provider in the medical record will then be accepted.	IFMC

	From	PGP Site	Date Rec'ed	Question	Date Answ'ed	Answer	By Whom
34	Steven Bernstein	U of Michigan	6/17/2005	For HEDIS apparently, their auditor accepts an entry in the Problem Summary List (PSL) of the electronic medical record, evidence dated prior to measurement year as evidence of a problem/diagnosis until it is cancelled or removed. Therefore it would not be necessary to the UMA test., etc on known nephropathy patients. When following the diagram on page 125 in the HEDIS specs-they would answer YES to the first step that the patient is documented with having a diagnosis of nephropathy or acute/chronic renal failure, etc. and stop on patients where nothing is listed in the PSL then they would continue looking in the measurement year for mention in the progress notes, or the nephropathy tests and/or consults. We would like confirmation / interpretation whether on not IFMC would interpret this the same way.	7/6/2005	For the urine protein screening measure a case will pass if either a test for microalbumin was performed during the measurement period OR the patient had evidence of nephropathy. Evidence of nephropathy may be determined using historical (prior to the measurement period) documentation. If there is documentation of nephropathy either prior to the measurement period or during the measurement period, it is not necessary to look further in the record for documentation regarding a microalbumin test.	IFMC
35	Elliott, Dianne	Deaconness Billings Clinic	6/21/2005	Will the abstraction tool contain specifics such as labs (A1c or Lipids) and vaccines?	7/6/2005	The abstraction tool will be loaded with available information from claims data on these specifics.	RTI
				Diabetes Specific Questions			
36	Bernstein, Steven	U of Michigan	6/7/2005	Why do we need to record ALL HbA1c measures for the year?	6/13/2005	The tool has been modified to remove all fields unnecessary to the calculation of the measure. We are only collecting the last test value instead of all values for this measure as it does not require it be accomplished at every visit to the primary care provider.	IFMC
37	Bernstein, Steven	U of Michigan	6/7/2005	Why do we need to record ALL lipid measures for the year?	6/13/2005	See answer to #36.	IFMC
38	Bernstein, Steven	U of Michigan	6/7/2005	What is the definition of renal insufficiency? Is this a physician listed diagnosis, a serum creatinine level, a calculated glomerular	6/20/2005	Because variation of levels exists across races, a listed diagnosis of renal insufficiency will be used.	IFMC

	From	PGP Site	Date Rec'ed	Question	Date Answ'ed	Answer	By Whom
				filtration rate (and if so, what threshold do we use since thresholds differ between African-Americans and non-African Americans.			
39	Bernstein, Steven	U of Michigan	6/7/2005	*Please provide a reference source which supports reporting a "trace" urine dipstick as "positive"?* I reviewed ALL three references to this section and none of them state that a "trace" result should be considered positive.	6/20/2005	Initial deliberations regarding measure specification components were reviewed and a decision was made to maintain the current list of synonyms for this measure.	IFMC
40	Bernstein, Steven	U of Michigan	6/7/2005	Why are we collecting this information if the criteria is completion of the eye exam?	6/13/2005	We assume you are referring to the "referral" information. If so, it has been removed.	IFMC
41	Bernstein, Steven	U of Michigan	6/7/2005	We understood that the numerator and denominator definitions for DM-1 (HBA1c test), DM-6 (monitoring for diabetic nephropathy), and DM-7 (eye exam) are to be the same for the PGP Demonstration project, and HEDIS specifications. However there are details listed in HEDIS specification that are not listed in the PGP description. i.e. HEDIS measure includes a positive result for macroalbuminaria in the numerator. This is not stated in the numerator description of DM-6, but is in the data abstraction definition as a data element.	6/13/2005	DM-1 through DM-6 are part of the National Diabetes Quality Improvement Alliance Performance Measurement Set for Adult Diabetes and not the relatively comparable HEDIS measures. Therefore, they are not specified identically, but they are quite similar. In the example you listed regarding DM-6, the analytic flow chart defines the numerator as "patients who received any test for microalbuminuria or who had evidence of medical attention for existing nephropathy during the measurement period (diagnosis of nephropathy or documentation of microalbuminuria or albuminuria)". Macroalbuminuria is an example for nephropathy, not a substitute for microalbuminuria. In the HEDIS measure and in the DOQ measure we are looking for evidence of screening for microalbuminuria OR evidence of medical attention for nephropathy or positive macroalbuminuria.	IFMC

	From	PGP Site	Date Rec'ed	Question	Date Answ'ed	Answer	By Whom
42	Bernstein, Steven	U of Michigan	6/7/2005	The denominator for the diabetes measures in the Demonstration project states diabetics are determined based on age 18-75 with a diagnosis from appendix M.1. HEDIS also includes insulin utilization as a method to identify diabetic members. Although it is not included in the denominator specification, it is included as a data element in the data abstraction definitions.	6/13/05	For the PGP Demonstration the denominator inclusions will be determined through Medicare claims data. As a result, data on insulin utilization cannot be used for this purpose since they are not included in Medicare claims data.	IFMC
43	Bernstein, Steven	U of Michigan	6/7/2005	The analytic flowcharts for DM-2 (HBA1c management control) and DM-5 (LDL cholesterol level) note that if included in DM-1 (HbA1c Management) and DM-4 (Lipid Measurement) respectively, include in the denominator for DM-2 and DM-5. If the test was performed (as indicated in DM-1 and DM-4), but the lab value itself is not available, should these records be excluded from the denominator for DM-2 and DM-5?	6/13/05	In looking at each pair of measures, IFMC counts that the test was performed in the first measure; however, does not include it in the calculations regarding value of the test.	IFMC
44	Bernstein, Steven	U of Michigan	6/7/2005	Appendix P (Version 3.0) appears to have CPT codes listed in the ICD-9 column for microalbuminaria.	6/20/2005	These are CPT codes. Moved to column P.2	IFMC
45	Bernstein, Steven	U of Michigan	6/7/2005	Appendix M (Version 3.0) - ICD-9 Diagnosis Code listed as 648.0. Our ICD-9 documentation indicates that this code requires a fifth digit.	6/20/2005	Correct, 648.00-648.04 is listed in Appendix M.	IFMC
46	Bernstein, Steven	U of Michigan	6/7/2005	Appendix P (Version 3.0) – our ICD-9 documentation indicates that the codes listed require additional digits (250.4X, 403.XX, 404.XX, 588.X, 588.8X, 753.1X)	6/20/2005	Correct, 250.4X, 403.XX, 404.XX, 588.X, 588.8X and 753.1X added to appendices	IFMC

	From	PGP Site	Date Rec'ed	Question	Date Answ'ed	Answer	By Whom
47	Bernstein, Steven	U of Michigan	6/7/2005	There are exclusions listed for Heart Failure in the data abstraction definition that are not listed in the analytic flowchart page.	6/20/2005	The exclusions listed in the data abstraction definition document are terms that cannot be used to confirm the diagnosis of Heart Failure. They are not terms that are used to exclude patients from Heart Failure measure denominators.	IFMC
48	Bernstein, Steven	U of Michigan	6/7/2005	Is an LVF assessment counted in the numerator if the test was performed at any time, or only during the measurement year? The measure definition does not clarify this, although the data abstraction definition does have an element for the test performed during the measurement year only.	6/13/05	For HF-1, qualitative or quantitative results occurring any time qualifies for the numerator. For HF-2, the test needs to occur within the measurement year.	IFMC
CAD Specific Questions							
49	Bernstein, Steven	U of Michigan	6/7/2005	Criteria seem a bit dated since most recommendations are to have all patients with CAD on lipid lowering therapy.	6/13/2005	The measure specifications for CAD-2 (Drug Therapy for Lowering LDL Cholesterol) were modified to exclude patients from the denominator with an LDL value less than 100 mg/dl.	IFMC

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50	Bernstein, Steven	U of Michigan	6/7/2005	What is the definition of an office visit?	6/20/2005	For quality measures requiring actions during visits, the visits to be assessed will be limited to those identified in claims data as primary care or similar visits conducted by providers associated with the participating PGP. These visits will be defined as Part B Carrier (Physician/Supplier) claims or line items with all of the following: a participating PGP EIN number; a CPT code in DOQ Appendix K; and a provider specialty code for general practice, family practice, internal medicine, geriatric medicine, nurse practitioner, or physicians assistant. Please refer also to answers #4 and #5.	RTI
51	Bernstein, Steven	U of Michigan	6/7/2005	What is the accuracy of using "angina" as an inclusion criteria for CAD (codes 411.0-411.89, 413.0-413.9)?	6/20/2005	The angina codes for CAD inclusion are a part of the DOQ specifications developed in collaboration with the AMA's Physician Consortium for Performance Improvement. IFMC did not detect a pattern of inaccuracy in their onsite review of patients identified with CAD.	IFMC
52	Bernstein, Steven	U of Michigan	6/7/2005	If both a calculated LDL-C and a direct LDL-C are in the chart on the same day, which takes priority for recording?	6/14/2005	Direct LDL-C will take priority.	IFMC
53	Bernstein, Steven	U of Michigan	6/7/2005	Does physician need to document the medical reasons listed in Column 3 specifically OR if a patient has one of these diagnoses that is sufficient for "not prescribed medical reason."	6/14/2005	If the patient has one of the listed diagnosis that is sufficient. As a reminder, exclusions are only applied if the patient is not receiving the therapy.	IFMC

	From	PGP Site	Date Rec'ed	Question	Date Answ'ed	Answer	By Whom
Preventive Care Specific Questions							
54	Bernstein, Steven	U of Michigan	6/7/2005	Conflict between narrative description of PC-6 Colorectal Cancer Screening (Version 4.0, Revised 06/18/04,page 2 of 4 AND Data Abstraction Definitions. The former limits tests to the **one-year measurement period** while the latter to the **measurement period** which may extend for 9 years. I assume dates will be modified to reflect this project?	6/20/2005	In the data definitions pertaining to the Colorectal Cancer Screening measure, the instruction indicates the abstractor is to determine if the colorectal cancer screening is current during the measurement period. To be considered current, several different steps could have been taken, e.g., a flexible sigmoidoscopy could have been performed during the measurement period or during the 4 years prior to this period. For the purposes of PGP a one-year measurement period is used and may be stated as either a "one-year measurement period" or the "measurement period."	IFMC
55	Bernstein, Steven	U of Michigan	6/7/2005	Appendices AA, V, NN and PC2, what are they used for.	6/13/2005	These were appendices developed for measures outside the measures used for the PGP Demo and will be deleted.	IFMC

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Heart Failure Specific questions							
56	Ward, Kathleen	U of Michigan	5/13/2005	Wouldn't it perhaps be appropriate to remove transplanted patients from the denominator of HF measures? This may not be a big deal for some of the PGPs, but we have several hundred. In our HF disease management program, these people are flagged and followed somewhat differently. With the removal of the diseased heart, some of these tests may not be performed.	6/13/05	The measure specifications needed to identify the HF patient population have been changed to reflect an exclusion of patients that have undergone heart transplant when (and only if) a diagnosis of heart failure has not reoccurred following the transplant procedure.	IFMC/CMS
57	Ward, Kathleen	U of Michigan	5/13/2005	HF1: Does the presence of an ejection fraction result within the Echo, MUGA, or Cardiac Perfusion reports on our "electronic medical record" (called Careweb) suffice as "documented"?	6/13/2005	Yes	IFMC
58	Ward, Kathleen	U of Michigan	5/13/2005	HF2: Why are ED & Observation CPTs included as Inpatient criteria?	6/20/2005	Observation codes can be used for hospital stays up to three days so were included. ED codes may be used for evaluation of patients in the ER which would indicate the patient was seen in the emergency room at the hospital. Although the ED code would not necessarily indicate admission to a hospital it would indicate care provided in an acute setting.	RTI
59	Ward, Kathleen	U of Michigan	5/13/2005	HF2: Are we counting individuals or inpatient discharges in the numerator/denominator?	6/13/2005	Individuals are used for this measure.	IFMC
60	Ward, Kathleen	U of Michigan	5/13/2005	HF5: One or more visits during 6 month period - OR - every visit within 6 month period?	6/13/2005	The measure specifications for the HF-5 (Heart Failure Education) measure have been modified to capture whether heart failure education has been provided at least one time during the performance period rather than at least once every six months.	IFMC

	From	PGP Site	Date Rec'ed	Question	Date Answ'ed	Answer	By Whom
61	Ward, Kathleen	U of Michigan	5/13/2005	HF6 & HF7 & HF8: If denominator doesn't reach 411/615 do we have to go to the entire patient population of eligibles?	6/20/2005	Yes, please see p. 14 of the Quality Measurement and Reporting Specifications.	RTI
62	Schneider, Katherine	IRMA	5/27/2005	HF 3 and 4, HTN 1: Check what constitute denominator – all visits? Last visit? Whose claim?	6/13/05	Please see answer to #4.	IFMC
63	Bernstein, Steven	U of Michigan	6/7/2005	Why is "severity not specified" considered equivalent to moderate to severe dysfunction when a note says "systolic dysfunction", "left ventricular systolic dysfunction" or "left ventricular dysfunction"?	6/20/2005	The synonyms used to describe moderate or severe LVSD were taken from the Heart Failure CMS (national) inpatient data collection tool. In the examples listed in the specification, it was felt that if the physician/report stated there was dysfunction that most often the result would meet the moderate to severe classification.	IFMC
64	Bernstein, Steven	U of Michigan	6/7/2005	Institutions are to provide information on whether home services weighed a patient? For referral centers where local management may occur by a patient's primary care provider, how are we to know if this is done.	6/20/2005	We assume the question refers to HF-3. The codes included in the specification are ones that can be used by providers when they make a home visit. Visits are defined as face-to-face encounters with their provider regardless of the location, i.e., office, home. Although this scenario will likely be infrequent it may occur. We have reduced the likelihood of this by requiring eligible visits for this measure to have the participating PGP's EIN number. Thus visits conducted by home health agencies that do not bill Medicare using the PGP's EIN number will not be assessed for this measure. Moreover, we are now requiring the provider specialty code to include a primary care physician, NP, or PA. The answers to #4 and #50 provide more clarification.	RTI

	From	PGP Site	Date Rec'ed	Question	Date Answ'ed	Answer	By Whom
65	Bernstein, Steven	U of Michigan	6/7/2005	Why are appendices MM and NN included?	6/13/2005	These were appendices developed for measures outside the measures used for the PGP Demo and have been deleted.	IFMC